

Check Sheet

Company Name: Monsanto Chemical Company  
Permit Number: AC 17-145652  
PSD Number: \_\_\_\_\_  
Permit Engineer: \_\_\_\_\_

**Application:**

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

**Cross References:**

- AC 17 - 27953
- AO 17 - 77404
- 

Expansion to Maleic Anhydride  
plant

**Intent:**

- Intent to Issue
- Notice of Intent to Issue
- Technical Evaluation
- BACT or LAER Determination
- Unsigned Permit
- Correspondence with:
  - EPA
  - Park Services
  - Other
- Proof of Publication
  - Petitions - (Related to extensions, hearings, etc.)
  - Waiver of Department Action
  - Other

**Final**

**Determination:**

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

# Monsanto

THE CHEMICAL GROUP  
P.O. Box 97  
Gonzalez, FL 32560-0097  
Phone: (904) 968-7000

RECEIVED

OCT 13 1993

Division of Air  
Resources Management

October 11, 1993

Mr. Winston Smith, Chief  
Air Management Branch  
Environmental Protection Agency, Region IV  
345 Courtland Street  
Atlanta, Georgia 30365

Dear Mr. Smith:

This letter is submitted to fulfill the semi-annual reporting requirements in 40 CFR 60.487(c) for the maleic anhydride process unit at Monsanto Company's Pensacola plant.

As first noted in L. L. Brown's letter to J. T. Wilburn dated April 16, 1984, the Maleic unit has elected to comply with the allowable percentage of valves leaking as specified in 40 CFR 60.483-1. The test was performed from July 29 through August 3, 1993. All valves and pumps were in compliance, with no leaks detected.

Between March 31, 1993 and October 1, 1993, the "process unit shutdowns" were as follows: (1) April 19 until May 29; (2) June 28 until July 1; (3) August 16 until September 11; (4) September 14.

Sincerely,



D. R. Collins  
Engineer  
Environmental Affairs

c: E. Middleswart, DER, Pensacola  
PSD Coordinator, DER, Tallahassee

AC17-143652

# Monsanto

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MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

July 16, 1990

RECEIVED  
JUL 20 1990  
DER-BAQM

PSD Coordinator  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear PSD Coordinator:

Attached is the report of Excess Emissions from Monsanto's Maleic Anhydride Production Facility, Permit AC17-143652, for the second quarter of 1990.

If you have any questions concerning this information, please contact me at 904/968-7770.

Sincerely,



R. T. Cannon, General Engineer  
Environmental Control

Attachment

JUN.30Q

MONSANTO PENSACOLA  
MALEIC ANHYDRIDE PLANT  
PERMIT AC17-143652

QUARTERLY EXCESS EMISSION REPORT  
FOR THE SECOND QUARTER 1990

1. No instances of excess emissions of CO from the boilers occurred.
2. No instances of excess venting occurred.

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.  
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)      2.  Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Bruce P. McLeod Environmental Regulatory Affairs Monsanto Chemical Company P. O. Box 12830 Pensacola, FL 32575-2830	4. Article Number P 407 853 154 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature -- Addressee X	Always obtain signature of addressee or agent and <b>DATE DELIVERED</b> .
6. Signature -- Agent X <i>Bob Putney</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery	

PS Form 3811, Apr. 1989

\*U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

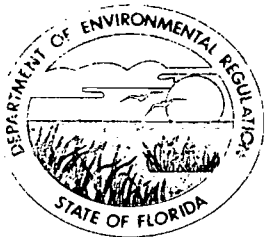
P 407 853 154  
RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

\*U.S.G.P.O. 1989-234-555

Sent to Mr. Bruce P. McLeod, Monsanto	
Street and No. P. O. Box 12830	
P.O., State and ZIP Code Pensacola, FL 32575-2830	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 2-15-91 Permit: AC 17-145652	

PS Form 3800, June 1985



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 11, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bruce P. McLeod, Consultant  
Environmental Regulatory Affairs  
Monsanto Chemical Company  
Post Office Box 12830  
Pensacola, Florida 32575-2830

Dear Mr. McLeod:

Re: Permit AC 17-145652 Maleic Anhydride Plant

The Department is in receipt of your letter dated January 2, 1991 requesting an extension of the expiration date of the above mentioned permit. The source is located at the Monsanto Chemical Company in Pensacola, Florida. This request is acceptable. The expiration date for this permit will be changed as follows:

From: May 31, 1991  
To: December 30, 1991

This letter must be attached to the above mentioned permit and shall become a part of the permit.

Attachment to be Incorporated:

- Mr. Bruce P. McLeod's letter of January 2, 1991.

Sincerely,

fr

STEVE SMALLWOOD, P.E.  
Director  
Division of Air Resources  
Management

SS/TH/plm

c: Jack Preece, NE Dist.



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

# Interoffice Memorandum

TO: Steve Smallwood  
FROM: Clair Fancy *CF*  
DATE: February 11, 1991  
SUBJ: Amendment to Construction Permit AC 17-145652  
Monsanto Company

Attached for your approval and signature is a letter extending the expiration date for the above referenced construction permit.

The Bureau recommends approval of this amendment.

CF/TH/plm

Attachment

# Monsanto

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MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

RECEIVED

JAN 4 1991

DER-BAQM

VIA CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 2, 1991

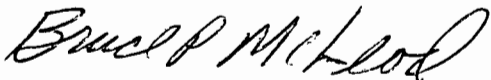
Mr. C. H. Fancy, P.E.  
Bureau of Air Quality  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

A six month extension to construction permit AC17-143652, Modification of the Maleic Anhydride Plant, is requested. This extension is necessary to complete the expansion activities and conduct the required emissions stack tests.

Thank you for your consideration in this matter. I can be reached at 904-968-8725.

Sincerely,



Bruce P. McLeod  
Consultant  
Environmental Regulatory Affairs

cc: J. Dixon  
E. Middleswart

2067.BPM



**Monsanto**

**MONSANTO COMPANY**  
P. O. Box 12830  
Pensacola, Florida 32575

CERTIFIED  
P 437 511 714  
MAIL

*Water Safety*  
#1 Priority

PENSACOLA FL 325  
PM  
JAN 1991

U.S. POSTAL SERVICE  
OFFICIAL SPONSOR  
1992 OLYMPIC GAMES  
2.00

VIA CERTIFIED MAIL - RETURN RECEIPT REQUESTED

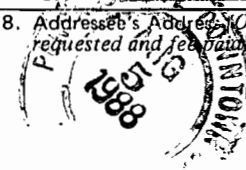
MR C H FANCY P E  
BUREAU OF AIR QUALITY  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
2600 BLAIR STONE ROAD  
TALLAHASSEE FL 32399-2400



**SENDER:** Complete items 1 and 2 when additional services are desired, and complete item 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent the card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. 2.  Restricted Delivery  
↑(Extra charge)↑ ↑(Extra charge)↑

<p>3. Article Addressed to:</p> <p style="margin-left: 20px;">Mr. W. J. Board Monsanto Company Post Office Box 12830 Pensacola, FL 32575</p>	<p>4. Article Number P 702 177 471</p> <p>Type of Service:  <input type="checkbox"/> Registered <input type="checkbox"/> Insured  <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD  <input type="checkbox"/> Express Mail</p> <p>Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b></p>
<p>5. Signature - Addressee X</p>	<p>8. Addressee's Address <i>ONLY if requested and fee paid</i></p> 
<p>6. Signature - Agent X <i>Bob Putney</i></p>	
<p>7. Date of Delivery</p>	

PS Form 3811, Mar. 1987

\* U.S.G.P.O. 1987-178-268

DOMESTIC RETURN RECEIPT

P 702 177 471  
**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

PS Form 3800, June 1985

Sent to Mr. W. J. Board, Monsanto Co.	
Street and No. P. O. Box 12830	
P.O. State and ZIP Code Pensacola, FL 32575	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date  Permit: AC 17-143652 Mailed: 8-3-88	



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

Mr. W.J. Board  
Monsanto Company  
Post Office Box 12830  
Pensacola, Florida 32575

August 3, 1988

Enclosed is permit No. AC 17-143652, for Monsanto Company to construct/modify a Maleic Anhydride Plant at the company's chemical complex near Cantonment, Escambia County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any Party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

*for* *C. H. Fancy*  
C. H. Fancy, P.E.

Deputy Chief  
Bureau of Air Quality Management

Copy furnished to:

B. McLeod, P.E.  
J. Preece, NW Dist.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 3, 1988.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(9), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

Matthew Wise August 3, 1988  
Clerk Date

Final Determination

Monsanto Chemical Company  
Escambia County

Permit No. AC 17-143652  
Maleic Anhydride Facility Modification

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

July 27, 1988

## Final Determination

Monsanto Chemical Company's application for a permit to construct/modify a Maleic Anhydride Plant at the Company's chemical complex near Cantonment, Escambia County, Florida, has been reviewed by the Bureau of Air Quality Management.

Public Notice of the Department's Intent to Issue the construction permit was published in the Pensacola News Journal on July 8, 1988.

Copies of the preliminary determination have been available for public inspection at the Department's District office in Pensacola and the Bureau of Air Quality Management office in Tallahassee.

Comments were received from Mr. Bruce McLeod, P.E., Environmental Control Section, for Monsanto Chemical Company. Mr. McLeod requested that the permit be modified as per his letter of June 15, 1988.

The Bureau has considered their request. Since these changes will not increase the permitted annual emission rates, the Bureau has determined the following:

### General

The expiration date of the construction permit will be changed.

From: November 30, 1990

To: May 31, 1991

### Specific Condition No. 3

From: Maximum contribution of the maleic anhydride plant to the VOC emissions from the boilers used to control the plant shall not exceed 9.1 lbs per hour and 39.9 tons per year.

To: Maximum contribution of the maleic anhydride plant to the VOC emissions from the boilers used to control the plant shall not exceed 39.9 tons per year on a 365 day rolling average.

### Specific Condition No. 4

From: Maximum contribution of the maleic anhydride plant to the CO emissions from the boilers used to control the plant shall not exceed 22 lbs/hour and 96.4 tons per year.

To: Maximum contribution of the maleic anhydride plant to the CO emissions from the boilers used to control the plant shall not exceed 96.4 tons per year on a 365 day rolling average.

Specific Condition No. 5 will not be changed.

Specific Condition No. 8 will be deleted.

Specific Condition No. 10

From: The permittee shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of carbon monoxide concentration in the flue gases from each of the two modified steam generators (Boilers No. 7 and 8).

The continuous monitoring system must be able to perform, at a minimum, one CO analysis every 15 minutes.

The permittee shall also monitor and record: (1) process off-gas flow rate, (2) fuel flow rate, (3) combustion air flow rate (4) furnace temperature, (5) operating time of each reactor, (6) flue gas temperature in each boiler and (7) other process parameters or information necessary for a calculation of the total flue gas volumetric flow rate from each steam generator.

The flue gas temperature in each modified steam generator shall be maintained at or above 1800°F while any amount of maleic anhydride plant off-gas is being incinerated in it. Operation below 1800°F shall be allowed only if specific performance tests have been conducted to demonstrate compliance at or below the specific operating furnace temperature.

To: The continuous monitoring system required in Federal permit PSD-FL-055 shall be maintained. Operation in excess of originally demonstrated off-gas flow rates is to be performed while monitoring the continuous CO emissions monitor to assure acceptable destruction efficiency.

Specific Condition No. 11

Proposed EPA reference Methods 10B for CO performance tests and 25A (Designed for measurement of VOC at Low Emission Rates from Gasoline Storage Facilities) will only be approved on a case by case basis via the Alternate Standard Procedures (ASP). This condition will not be changed. Method 25A Determination of Volatile Organic Compound Emissions from Stationary Sources will be deleted from this condition.

Specific Condition No. 13

From: To demonstrate compliance with the CO and VOC emission limits, the permittee shall continuously monitor CO concentrations, with an instrument that has a time lag of not more than 10 minutes and a frequency of not less than four measurements per hour. Calculate and record: (1) the flue gas volumetric flow rate; (2) CO emission, lb/hr, and; (3) estimated, VOC emission,

lb/hr from each of two steam generators. Alarms shall be installed to indicate process operation outside allowable emission limits.

To: The permittee shall comply with State and Federal specific conditions. Compliance shall be determined as specified in federal permit PSD-FL-055. The permittee shall calculate and record a 30 day rolling average for CO emissions.

Specific Condition No. 17

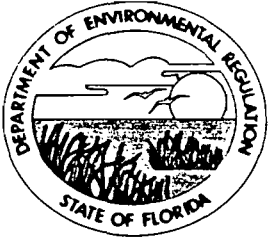
This condition will be deleted.

The final action of the Department will be to issue the permit with the changes described above.

Attachment to be Incorporated

Bruce McLeod's letter of June 15, 1988.





# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**

Monsanto Company  
P. O. Box 12830  
Pensacola, Florida 32575

Permit Number: AC 17-143652

Expiration Date: May 31, 1991

County: Escambia

Latitude/Longitude: 30° 35' 28" N  
87° 14' 25" W

Project: Maleic Anhydride  
Plant Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modification of a maleic anhydride plant. Emissions of volatile organic compounds (VOC) and carbon monoxide (CO) from this process are controlled by incinerating through existing boilers No. 7 and No. 8. The plant is located near Cantonment, Escambia County, Florida. The UTM coordinates of this source are Zone 16, 476.7 km East and 3384.5 km North.

Construction shall be in accordance with the permit application and plan, documents, amendments, and drawings submitted, except as noted in the Preliminary Determination or the Specific Conditions.

**Attachments:**

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1) dated February 18, 1988.
2. Monsanto Chemical Company's letter dated March 8, 1988.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

**GENERAL CONDITIONS:**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. This permit supersedes operating permit No. AO 17-77464.
2. This plant is allowed to operate continuously (8760 hours per year).
3. Maximum contribution of the maleic anhydride plant to the VOC emissions from the boilers used to control the plant shall not exceed 39.9 tons per year on a 356 day rolling average.
4. Maximum contribution of the maleic anhydride plant to the CO emissions from the boilers used to control the plant shall not exceed 96.4 tons per year on a 365 day rolling average.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

SPECIFIC CONDITIONS:

5. Due to the increase in VOC and CO emissions as a result of discharging the off-gases from the maleic anhydride plant to boilers No. 7 and No. 8, the operating permits for these boilers (No. 7 and No. 8) shall be modified to reflect this change.

6. During start-up, shutdown, and control system malfunction the source must comply with the following:

- a. The emissions will not exceed 1,750 pounds of either VOC (calculated as butane) or CO/reactor-hr for start-ups and malfunctions; 875 lbs of either VOC or CO/reactor-hr for shutdowns.
- b. No more than 1 1/2 hours shall be used for an individual reactor start-up or shutdown.
- c. No more than 8 reactor-hours for a total production start-up.
- d. No more than 6 reactor-hours during a control system malfunction to allow sufficient time to trouble shoot and correct the problem.

7. The maximum gas flow rate from the maleic anhydride plant to each boiler (No. 7 and No. 8) shall not exceed  $5.65 \times 10^6$  scf/hr ( $11.3 \times 10^6$  scfh total to both boilers).

8. The maximum maleic anhydride production shall not exceed 260 million pounds per year.

9. The continuous monitoring system required in Federal permit PSD-FL-055 shall be maintained. Operation in excess of originally demonstrated off-gas flow rates is to be performed while monitoring the continuous CO emissions monitor to assure acceptable destruction efficiency.

10. Compliance with the VOC and CO emission limits standards shall be determined by performance tests conducted in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8 (b) as follows:

- a. Method 1. Sample and Velocity Traverses
- b. Method 2. Volumetric Flow Rate

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

SPECIFIC CONDITIONS:

- c. Method 3. Gas Analysis
- d. Method 10. Determination of Carbon Monoxide Emissions from Stationary Sources
- e. Method 7. Determination of Nitrogen Oxides Emissions from Stationary Sources.
- f. Method 25 Determination of Volatile Organic Compound Emissions

The maleic anhydride process rate, variables and other routinely monitored steam generator process control parameters shall be recorded during compliance testing and made a part of the test report.

11. Test results will be the average of 3 valid runs. The Department's Northwest District office shall be notified 15 days in advance of the compliance tests. The tests will be conducted within 90 to 100% of permitted capacity.

12. The permittee shall comply with the State and Federal specific conditions. Compliance shall be determined as specified in federal permit PSD-FL-055. The permittee shall calculate and record a 30 day rolling average for CO emissions.

13. If visible emissions from product storage tanks exceed 5 percent opacity at maximum operating rate, the Department may require tests and/or air pollution controls to be installed on these tanks. Tests shall be conducted in accordance with EPA Method 9, Visual Determination of Opacity of Emissions from Stationary Sources.

14. Sampling procedures used to determine compliance shall be as specified in Rule 17-2.700, Stationary Point Sources Emissions Test Procedures.

15. Any violation of permit conditions shall be immediately reported to the Department's District office in Pensacola by telephone. The permittee shall keep continuous recording information available for Department inspection for two years.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

SPECIFIC CONDITIONS:

16. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, the Department must be notified in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit, (Rule 17-2, FAC).

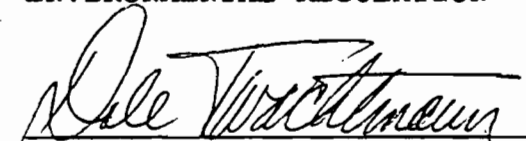
17. To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, compliance test results, and Certificate of Completion to the Department's Northwest District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate, (Rules 17-2 and 17-4, FAC).

18. If the construction permit expires prior to the permittee requesting an extension or filing an application for a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application, (Rule 17-4, FAC).

19. Upon obtaining a permit to operate, the permittee will be required to submit annual reports on the actual operating rates and emissions from the facility. Annual reports shall be sent to the Department's Northwest District office in Pensacola.

Issued this 28 day of July, 1988

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
Dale Twachtmann, Secretary





State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

# Interoffice Memorandum

TO: Dale Twachtmann

*for* FROM: Steve Smallwood *Smallwood*

SUBJ: Approval of Monsanto Chemical Company's Maleic Anhydride Facility Modification  
State Construction Permit Number: AC 17-143652

DATE: July 27, 1988

Attached for your approval and signature is a permit prepared by Central Air Permitting for the above mentioned company to modify the maleic anhydride plant located at their chemical complex near Cantonment in Escambia County, Florida. The applicant submitted comments during the comment period that were addressed in the Final Determination.

Day 90, after which this permit will be issued by default, is August 27, 1988.

I recommend your approval and signature.

SS/th

attachments


RECEIVED

JUL 28 1988

Office of the Secretary

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.  
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. 2.  Restricted Delivery  
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to:  Mr. W. J. Board Monsanto Company Post Office Box 12830 Pensacola, Florida 32575	4. Article Number P 274 007 438  Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b>	
5. Signature - Addressee <b>X</b>	8. Addressee's Address <i>(ONLY if requested and fee paid)</i> 
6. Signature - Agent <b>X</b> <i>[Signature]</i>	
7. Date of Delivery <i>8/25/88</i>	

PS Form 3811, Mar 1987      ★ U.S.G.P.O. 1987-178-268      **DOMESTIC RETURN RECEIPT**

P 274 007 438

**RECEIPT FOR CERTIFIED MAIL**  
 NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

★ U.S.G.P.O. 1985-480-794

Sent to	
Mr. W. J. Board, Monsanto Co.	
Street and No.	
P. O. Box 12830	
P.O. State and ZIP Code	
Pensacola, FL 32575	
Postage	S
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	S
Postmark or Date	
Mailed: 8-24-88	
Permir: AC 17-143652	

PS Form 3800, June 1985



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

August 23, 1988

Mr. W. J. Board  
Monsanto Company  
Post Office Box 12830  
Pensacola, Florida 32575

Dear Mr. Board:

We acknowledge receipt of Mr. Bruce McLeod's letter dated August 12, 1988, requesting a correction of a typographical error in Specific Condition No. 3 of the permit number AC 17-143652 for a maleic anhydride plant.

This typographical error has been corrected. We are attaching a corrected copy of page 5 of 8 of permit No. AC 17-143652 in response to this request.

Please replace the previous incorrect page with this one. We apologize for this inconvenience.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/plm

cc: Jack Preece  
Bruce McLeod

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: May 31, 1991

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. This permit supersedes operating permit No. AO 17-77464.
2. This plant is allowed to operate continuously (8760 hours per year).
3. Maximum contribution of the maleic anhydride plant to the VOC emissions from the boilers used to control the plant shall not exceed 39.9 tons per year on a 365 day rolling average.
4. Maximum contribution of the maleic anhydride plant to the CO emissions from the boilers used to control the plant shall not exceed 96.4 tons per year on a 365 day rolling average.

PM  
8-15-88  
Gonzalez, FL

*file copy*

# Monsanto

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

August 12, 1988

RECEIVED

AUG 17 1988

DER-BAQM

Mr. Clair Fancy  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

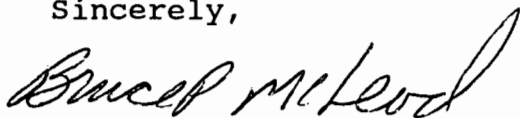
SUB: PERMIT AC17-143652 TYPOGRAPHICAL ERROR

This will document that a typographical error has been noted in Specific Condition No. 3 of the subject permit. This construction permit was transmitted to Monsanto via your cover letter to W. J. Board, August 3, 1988.

Specific Condition No. 3 incorrectly states the VOC emissions limit as a 356 day rolling average. This is clearly a typographical error because it should reference a 365 day rolling average. Monsanto's comments and the discussion in the Department's final determination are clear in the fact that the emissions limit was meant to be a rolling annual (365 days) average.

In a telephone conversation with Theresa Heron on August 9, 1988, this typographical error was pointed out. Ms. Heron agreed that this was, indeed, a typographical error. I am submitting this letter as a result of our conversation to document that Specific Condition No. 3 contains this typographical error. If anything additional is required, please contact me.

Sincerely,



Bruce P. McLeod  
Senior Specialist  
Environmental Control

*copied: Theresa Heron  
Gail Price, NW Dist.  
BT*

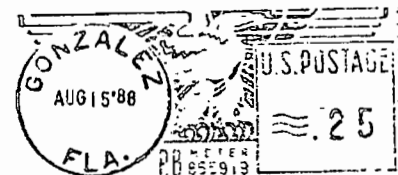
1309.BPM

# Monsanto

**MONSANTO CHEMICAL COMPANY**

P. O. Box 12830

Pensacola, Florida 32575



MR CLAIR FANCY  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE FL 32399-2400



Express Mail B21524323  
PM 6-14-88  
Coryallen, FL

file copy

# Monsanto

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

VIA OVERNIGHT MAIL

June 14, 1988

RECEIVED

JUN 15 1988

DER-BAQM

Mr. Clair Fancy  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

Attached is the public notice for permit AC17-145652.

If you have any questions, I can be reached at 904/968-8725.

Sincerely,



Bruce P. McLeod  
Senior Specialist  
Environmental Control

Attachment

Copies: Jessica Nelson } 6-16-88  
Jack Preece - (WWS)

1239.BPM



# POST OFFICE TO ADDRESSEE EXPRESS MAIL NEXT DAY SERVICE



**OVERNIGHT**

**B** 1524323

ORIGIN	
Post Office ZIP Code	Post Office ZIP Code
Initials of Receiving Clerk	Initials of Receiving Clerk

DESTINATION	
Post Office City/State	Post Office City/State
Delivery	Delivery

Delivery	Delivery
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AM	PM
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AM	PM
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**WAIVER OF SIGNATURE AND INDEMNITY**

I wish delivery to be made without obtaining the signature of the addressee or the addressee's agent and I authorize the delivery employee to sign that the shipment was delivered and understand that the signature of the delivery employee will constitute valid proof of delivery.

SIGNED: \_\_\_\_\_

**Account Number**

Using an authorized number indicates postage and fees paid.

Express Mail Corporate Account No. \_\_\_\_\_

Federal Agency Control No. \_\_\_\_\_

**FROM:**

Bruce P. McCoy  
Senior Sales Engineer  
Environ Chemical Co.  
P.O. Box 12330  
Pensacola, Florida 32502

**ADDRESSEE'S COPY**

**TO:**

Telephone Number: \_\_\_\_\_

Dept. of Commerce and Regulation  
250 Blair Stone Bldg.  
Tallahassee, Florida 32301

1. Consult your Next Day Service Directory for destination and rate information.
2. Prepare the customer portion of the Next Day Service mailing label (Post Office to Post Office or Post Office to meter).
3. Use your express mail corporate account number.
4. Mail at an Express Mail post office, Express Mail collection box, or contact your local post office for information on scheduled pick-up service.

For Post Office Use

For Customer Use

**PLACE MAILING LABEL HERE**



# PENSACOLA News Journal

PUBLISHED DAILY  
PENSACOLA, ESCAMBIA COUNTY, FLORIDA

RECEIVED

JUN 15 1988

State of Florida,  
County of Escambia.

DER-BAQM

Before the undersigned authority personally appeared

J. Diane Deal

who on oath says that she is Legal Advertising Supervisor  
of the Pensacola News Journal, a daily newspaper published at Pensacola in  
Escambia County, Florida; with general circulation in Escambia, Santa  
Rosa, Okaloosa and Walton Counties that the attached copy of  
advertisement, being a NOTICE in the matter of

\_\_\_\_\_

\_\_\_\_\_ in the \_\_\_\_\_ Court,

was published in said newspaper in the issues of \_\_\_\_\_

June 8, 1988

Affiant further say that the said The Pensacola News  
Journal is a newspaper published at Pensacola, in said Escam-  
bia County, Florida, and that the said newspaper has heretofore  
been continuously published in said Escambia County, Florida,  
each day and has been entered as second class mail matter at  
the post office in Pensacola, in said Escambia County, Florida,  
for a period of one year next preceding the first publication of  
the attached copy of advertisement; and affiant further says  
that he has neither paid nor promised any person, firm or cor-  
poration any discount, rebate, commission or refund for the  
purpose of securing this advertisement for publication in the  
said newspaper.

The Department of Envi-  
ronmental Regulation  
hereby gives notice of its  
intent to issue a permit  
to Monsanto Chemical  
Company to con-  
struct/modify a Maleic  
Anhydride Plant. The  
Department is issuing  
this Intent to Issue for  
the reasons stated in the  
Technical Evaluation and  
Preliminary Determina-  
tion.

Persons whose substan-  
tial interests are affected  
by the Department's pro-  
posed permitting deci-  
sion may petition for an  
administrative determi-  
nation (hearing) in ac-  
cordance with Section  
120.57, Florida Statutes.  
The petition must con-  
form to the requirements  
of Chapters 17-103 and  
28-5, Florida Administra-  
tive Code, and must be  
filed (received) in the  
Department's Office of  
General Counsel, 2600  
Blair Stone Road, Twin  
Towers Office Building,  
Tallahassee, Florida  
32399-2400, within four-  
teen (14) days of publica-  
tion of this notice. Fail-  
ure to file a petition  
within this time period  
constitutes a waiver of  
any right such person  
has to request an admin-  
istrative determination  
(hearing) under Section  
120.57, Florida Statutes.

If a petition is filed, the  
administrative hearing  
process is designed to  
formulate agency action.  
Accordingly, the Depart-  
ment's final action may  
be different from the  
proposed agency action.  
Therefore, persons who  
may not wish to file a  
petition may wish to  
intervene in the proceed-  
ing. A petition for inter-  
vention must be filed  
pursuant to Rule 28-  
5.207, Florida Adminis-  
trative Code, at least five  
(5) days before the final  
hearing and be filed with  
the hearing officer if one  
has been assigned at the  
Division of Administra-  
tive Hearings, Depart-  
ment of Administration,  
2009 Apalachee Park-  
way, Tallahassee, Florida  
32301. If no hearing offi-  
cer has been assigned,  
the petition is to be filed  
with the Department's

Office of General Coun-  
sel, 2600 Blair Stone  
Road, Tallahassee, Flor-  
ida 32399-2400. Failure  
to petition to intervene  
within the allowed time  
frame constitutes a  
waiver of any right such  
person has to request a  
hearing under Section  
120.57, Florida Statutes.

The application is avail-  
able for public inspection  
during normal business  
hours, 8:00 a.m. to 5:00  
p.m., Monday through  
Friday, except legal holi-  
days, at:

J. Diane Deal



Sworn to and subscribed before me this

June 10<sup>th</sup> day of June, A.D., 1988

Duffy Kester  
NOTARY PUBLIC.

My Commission Expires October 26, 1991

Dept. of Environmental  
Regulation  
Bureau of Air Quality  
Management  
2600 Blair Stone Road  
Tallahassee, Florida  
32399-2400

Dept. of Environmental  
Regulation  
Northwest District  
160 Governmental  
District  
Pensacola, Florida  
32501-5794

Any person may send  
written comments on the  
proposed action to Mr.  
Bill Thomas at the De-  
partment's Tallahassee  
address. All comments  
mailed within 14 days of  
the publication of this  
notice will be considered  
in the Department's final  
determination.

Legal No. 34533 1T  
June 8, 1988

---

PM  
6.15.88  
Gonzalez, FL

Full Copy

# Monsanto

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

VIA OVERNIGHT MAIL

June 15, 1988

RECEIVED

JUN 16 1988

DER-BAQ/m

Mr. Bill Thomas  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dear Mr. Thomas

Following are concern areas discussed and the resolutions reached in our May 31, 1988 meeting at DER headquarters. These issues relate to the proposed Maleic Anhydride Debottlenecking Project Construction Permit, AC17-143652. As agreed in this meeting, you will re-draft the preliminary determination. I will be allowed to review this permit draft prior to reissuance by the Department. These activities will be completed prior to expiration of the administrative hearing filing deadline, which has been extended by the Department to and including June 25, 1988. If necessary, a request for an additional filing deadline extension will be requested to facilitate these activities.

I hope this letter adequately represents the content of our discussion on May 31, 1988. The opportunity to meet with you and your consideration of these issues is greatly appreciated. I can be reached at 904/968-8725 for further discussion on any of these issues.

General

Based upon a current review of the construction timing, I requested an additional six months to the expiration date of the Construction Permit. This will be granted. This would result in a construction permit expiration of May 31, 1991.

The Department indicated that the Maleic and Boiler Permits may need to be modified to further define the conditions under which compliance testing will be demonstrated.

The following comments are referenced by the Specific Condition number of the permit:

1228.BPM

copied: Teresa Nelson  
CHF/BT  
Jack Preece



<b>POST OFFICE TO ADDRESSEE</b>		<b>EXPRESS MAIL</b>			<b>OVERNIGHT</b>
		<b>NEXT DAY SERVICE</b>			
<b>ORIGIN</b>	Date of Mailing	Postage		B 1521226	
Post Office ZIP Code	Time of Mailing A.M. P.M.	Rate	Postage		
Weight In. Oz.	Volume Cubic In.	Rate	Postage		
<input checked="" type="checkbox"/> <b>AGGREGATE</b>		1. Consult your Next Day Service Directory for destination and rate information.			
<input type="checkbox"/> <b>POST OFFICE TO POST OFFICE</b>		2. Prepare the customer portion of the Next Day Service mailing label (Post Office to Post Office or Post Office to address).			
<b>Account Number</b> (Using an authorized number indicates postage and fee paid.) Express Mail Corporate Account No.: Federal Agency Control No.:		<b>DESTINATION</b> City or Country			
<b>FROM:</b>		<b>TO:</b>		3. Sign the customer portion of the Next Day Service mailing label (Post Office to Post Office or Post Office to address).	
Telephone Number:		Telephone Number:		4. Mail at an Express Mail post office, Express Mail collection box, or contact your local post office for information on scheduled pick-up service.	
				<b>WAIVER OF SIGNATURE AND INDEMNITY</b>	
				I wish delivery to be made without obtaining the signature of the addressee or the addressee's agent and I authorize the delivery employee to sign that the shipment was delivered and understand that the signature of the delivery employee will constitute valid proof of delivery.	
				SIGNED: _____	
				<b>ADDRESSEE'S COPY</b>	
				PLACE MAILING LABEL HERE	

Specific Conditions 3 and 4 - Issue Description

Specific Conditions 3 and 4 provide that the maximum contribution of the Plant to emissions from the boilers used to control the Plant shall not exceed 9.1 lbs. per hour VOC and 22 lbs. per hour CO. Monsanto objects to these emission limits because they are inappropriate. Monsanto stated in its application that a VOC emission rate of 9.1 lbs. per hour and a CO emission rate of 22 lbs. per hour were annual average emission rates. The emission rates in Conditions 3 and 4, however, are written in terms of instantaneous maximum emission limits. Monsanto objects to inclusion of such limits since they are contrary to the permit application. Additionally, as described in Attachment A of this permit application, these annual emissions estimates do not include emissions from, start up, shutdown and malfunction events.

Specific Condition 3 and 4 - Issue Resolution

The 39.9 tons per year of VOC and 96.4 tons per year of CO are the annual emissions included in the Construction Permit application. However, the 9.1 lbs. per hour of VOC and 22 lbs. per hour of CO are annual average values as proposed by Monsanto.

The 9.1 lbs. per hour VOC will be deleted from Specific Condition 3 and the short-term emission rate included in the existing Construction Permit will be used as the short-term limitation for VOC. This limitation would be 110 lbs per hour VOC.

The 22 lbs. per hour CO will be deleted from Specific Condition 4; and the short-term emission rate included in the existing construction permit will be used as the short-term limitation for CO. This limitation would be 148 lbs. per hour CO.

If desired by the Department, Monsanto could calculate a moving annual average for CO emissions based on the continuous CO monitor on the boiler stacks. This would allow a real time assessment of compliance with the CO annual emission limitation of 96.4 tons per year.

Specific Condition 5 - Issue Description

Specific Condition 5 requires the operating permits for boilers No. 7 and No. 8 to be modified to reflect the increase in VOC and CO emissions resulting from Plant modifications. Monsanto objects to this condition as being unnecessary. Specific Conditions 3 and 4 already limit VOC and CO emissions from the Plant, and thus from the boilers. No prior department permit for the boilers has contained VOC or CO limits based upon Plant permit VOC or CO limits because they would be redundant. This has resulted in clear, easy-to-understand, and effective permit limits:

Specific Condition 5 - Issue Resolution

Specific Condition 5 will be deleted.

Specific Condition 7 and 8 - Issue Description

These are redundant. Air compression capacity and off-gas flow rate to the boilers are essentially equal. Since the current operating permit places a maximum off-gas flow rate to the boiler. For permitting consistency, Specific Condition 8 should be deleted and Specific Condition 7 should be retained

Specific Condition 7 and 8 - Issue Resolution

Specific Condition 8 will be deleted.

Specific Condition 10 - Issue Description

Specific condition 10 is extracted from the EPA PSD permit. Therefore Specific Condition 10 is redundant.

The last paragraph of this Specific Condition deals with demonstration of compliance at furnace temperatures below 1800 degrees F. This is a one-time demonstration, which was fulfilled during the initial facility demonstration testing in 1983.

It is requested that Condition 10 be deleted since the CO emissions from the boiler are continuously monitored. This is the primary process control parameter. Establishment of a minimum boiler furnace box temperature is redundant and not applicable and is a less direct measurement of combustion efficiency.

In the event that a combustion efficiency statement is required in lieu of Specific Condition 10, the following language would be acceptable:

"Operation in excess of originally demonstrated off-gas flow rates is to be performed while monitoring the continuous CO emissions monitor to assure acceptable destruction efficiency."

Specific Condition 10 - Issue Resolution

Specific Condition 10 will be deleted and replaced with the following language:

"Operation in excess of originally demonstrated off-gas flow rates is to be performed while monitoring the continuous CO emissions monitor to assure acceptable destruction efficiency."

Specific Condition 11 - Issue Description

Specific Condition 11.d. lists EPA reference methods 10 for CO performance tests. Petitioner requests the Department to add proposed EPA reference method 10B as an option for CO performance tests. Method 10B substitutes a gas chromatograph for the NDIR instrument in method 10, allowing immediate and more accurate results.

Specific Condition 11.f. lists EPA reference methods 25 or 25A for VOC performance tests. Petitioner requests that it be permitted to use method 25A, specifically a Beckman analyzer, but to calculate VOC by subtracting the methane component as done with method 25. Calculating VOC as non-methane organic carbon was the basis for the BACT determination of March 25, 1981, for the Plant (see page 3 of said determination) and represents the basis for the VOC emission rates set forth in Petitioner's application.

#### Specific Condition 11 - Issue Resolution

BAQM will consult with its technical support group for input on acceptability of these compliance test methods.

#### Specific Condition 13 - Issue Description

Specific condition 13 has been extracted from the EPA-PSD permit and is therefore redundant. Portions of this condition are also invalid because it is based on the assumption that a correlation between CO and VOC emissions would be developed. The original demonstration testing confirmed that a correlation did not exist but did show that VOC lagged CO and was less than CO. In other words, if CO was in control VOC would be in control.

Monsanto can calculate a moving annual average for CO emissions based on the continuous CO analyzers on the boilers. This would provide the department with more useful information and better compliance assurance than the current language of Specific Condition 13.

#### Specific Condition 13 - Issue Resolution

The existing Specific Condition 13 will be deleted and replaced with the following:

"The permittee shall calculate and record a moving annual average for CO emissions."

#### Specific Condition 17 - Issue Description

Specific Condition 17 limits Plant operation at the higher production rates until EPA modifies the PSD permit for the Plant. Condition 6 of the PSD permit requires Petitioner to notify EPA of changes that will result in increased emissions; no permit modification is required unless mandated by PSD rules. The Department states in part V of its Technical Evaluation and Preliminary Determination accompanying the Construction Permit that the modification is exempt from PSD review requirements. While Petitioner must notify EPA of the increased emissions, no PSD permit modification is required.

#### Specific Condition 17 - Issue Resolution

June 10, 1988

Specific Condition 17 will be deleted. Monsanto notified EPA of the planned changes in material processing rates on June 6, 1988 with a copy submitted to the FDER BAQM.

Sincerely,



Bruce P. McLeod  
Senior Specialist  
Environmental Control

c: Mr. Clair Fancy, FDER, Tallahassee  
Mr. J. G. Wiley, Monsanto, Pensacola





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV  
345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

PM  
6-15-88  
Atlanta, GA

file copy  
AC 17-145652

RECEIVED

JUN 14 1988

JUN 20 1988

4APT-APB

DER-BAQM

Margaret V. Janes  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Re: Monsanto Chemical Company (PSD-FL-131)

Dear Ms. Janes:

This is to acknowledge our receipt of the preliminary determination and draft permit for the proposed production increase and emissions reduction at the Monsanto Chemical Company. Since the modification results in emission decreases, Monsanto will not be subject to prevention of significant deterioration (PSD) requirements. We have reviewed the draft permit and concurred with your decision.

Please submit the final determination and final permit when they are issued. If you have any additional comments or information, please feel free to contact me or Gary Ng of my staff at (404) 347-2864.

Sincerely yours,

*Bruce P. Miller*

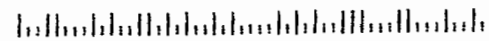
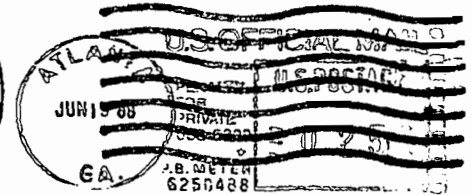
Bruce P. Miller, Chief  
Air Programs Branch  
Air, Pesticides, and Toxics  
Management Division

*Copied: Teresa Nelson  
Gael Price  
CHF/BT*

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION IV  
345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300  
AIR-4

Ms. Margaret V. Janes  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400



PM  
8 June 1988  
Gonzalez, FL

file copy

# Monsanto

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575-2830  
Phone: (904) 968-7000

RECEIVED  
JUN 9 1988  
DER-BAQM

VIA OVERNIGHT MAIL

June 6, 1988

Mr. Bruce Miller  
Chief Air Facilities Branch  
Air and Hazardous Materials Division  
U.S. Environmental Protection Agency, Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30355

Dear Mr. Miller

This letter is submitted in conformance with PSD permit PSD-FL-055 Maleic Anhydride Production Facility. Specific Condition 6 of this permit requires EPA notification of changes in the quantity of materials processed.

The Pensacola plant has submitted a construction permit application to the Florida Department of Environmental Regulation (FDER) requesting an increase in air processing flow rate, which will allow an increase in Maleic Anhydride production capacity. The Maleic Anhydride production capacity is projected to increase up to 260 million pounds per year. This will be accomplished by increasing air compression capacity and, hence, off-gas flow rate up to 5.65 million standard cubic feet per hour per boiler. Facility design will remain the same with four butane oxidation reactors. The off-gas from these reactors will continue to be incinerated in two existing plant utility boilers.

The Maleic Anhydride Facility construction permit was sent to your office via cover letter from Margaret B. James to Wayne Aronson dated March 3, 1988 to which your office responded with comments via the cover letter from you (signed by Wayne Aronson) to M. B. James dated March 16, 1988, EPA reference number 4 APT-APB. The FDER preliminary determination was also submitted to you via the cover letter from Margaret B. James to Wayne Aronson dated May 12, 1988 (response requested by FDER by May 30, 1988).

1222.BPM

The allowable emissions requested in the FDER construction permit application compared to actual facility emissions are below the de minimis increases for hydrocarbons and CO. Therefore PSD review is not triggered. EPA response No. 1 addressing Monsanto's comment No. 1 included in EPA's final determination of permit PSD-FL-055 states that production in excess of design rates can occur providing compliance with allowable emissions limits is maintained. No change in the plant's ability to comply with the PSD permit allowable limits will result from this production capacity increase.

Since time is of the essence in this project, we would appreciate a written response within thirty (30) days acknowledging receipt of this updated process flow information and concurrence that no EPA permitting is required.

This project is critical to the long-term viability of the Monsanto Pensacola plant. Your prompt attention to this issue will be greatly appreciated.

Sincerely,

*Bruce P. McLeod*

Bruce P. McLeod  
Senior Specialist  
Environmental Control

c: Mr. Clair Fancy, BAQM, FDER, Tallahassee  
Mr. J. G. Wiley, Monsanto, Pensacola

Copied Jack Bruce }  
Teresa Heron } 6-10-88  
CHF/BT }

6-10-88  
CHF  
BT } FUI  
④



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

May 12, 1988

Mr. Wayne Aronson, Chief  
Program Support Section  
U.S. EPA, Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

Dear Mr. Aronson:

RE: Monsanto Chemical Company  
Modification to a Major Source  
State Construction Permit Number: AC 17-145652  
New PSD Number: PSD-FL-131  
Past PSD Number: PSD-FL-055

Enclosed for your review and comment is the Technical Evaluation/Preliminary Determination for the above referenced company. We have deleted the new PSD number since this source is not considered to fall under the requirements for a PSD permit. However, since EPA issued the original federal PSD construction permit for this source, we are sending you the modification of that permit for your file.

If you have any comments or questions, please contact Teresa Heron by May 30, 1988, at the above address or at (904)488-1344.

Sincerely,

*M. V. Janes*

Margaret V. Janes  
Bureau of Air Quality  
Management

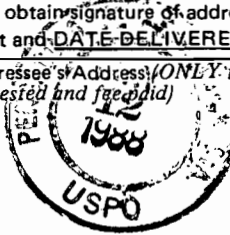
/mj

cc: Teresa Heron

Enclosures

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete Items 3 and 4.  
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. 2.  Restricted Delivery  
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Mr. W.J. Board General Superintendent Monsanto Company P.O. Box 12830 Pensacola, FL 32575	4. Article Number P 702 175 418 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b>
5. Signature - Addressee <input checked="" type="checkbox"/> <i>Bob Putney</i>	8. Addressee's Address <i>(ONLY if requested and fee paid)</i> 
6. Signature - Agent <input checked="" type="checkbox"/>	
7. Date of Delivery	

PS Form 3811, Mar. 1987

\* U.S.G.P.O. 1987-178-268

DOMESTIC RETURN RECEIPT

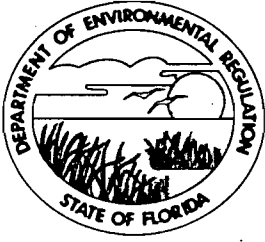
P 702 175 418  
**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

Send to: Mr. W. J. Board, Gen. Supt.	
Monsanto Company	
Street and No. P.O. Box 12830	
P.O., State and ZIP Code Pensacola, FL 32575	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$

PS Form 3800, June 1985

Postmark or Date  
 Mailed: 05/11/88  
 Permit: AC 17-145652



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

May 9, 1988

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. W. J. Board  
General Superintendent  
Monsanto Company  
P.O. Box 12830  
Pensacola, Florida 32575

Dear Mr. Board:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to Monsanto Chemical Company to construct/modify a maleic anhydride plant.

Please submit, in writing, any comments which you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

*C. H. Fancy*  
For C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/TH/ss

Attachments

cc: Jack Preece, NW. District  
Bruce D. Mcleod, P.E.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Applications for Permits by:

Monsanto Chemical Company  
Post Office Box 12830  
Pensacola, Florida 32515

---

DER File No. AC 17-145652

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the applications specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Monsanto Chemical Company, applied on February 18, 1988, to the Department of Environmental Regulation for a permit to construct/modify a maleic anhydride plant located in the Company's chemical complex near Cantonment, Escambia County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit was needed for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit applications. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30) days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

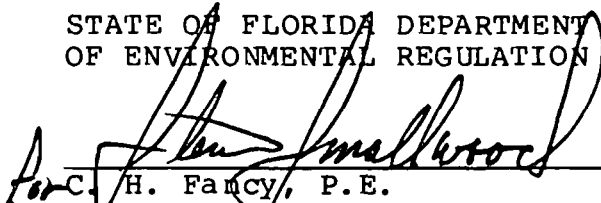
The Department will issue the permits with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the



Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copy enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

Copies furnished to:

Jack Preece  
Bruce D. McLeod

RULES OF THE ADMINISTRATIVE COMMISSION  
MODEL RULES OF PROCEDURE  
CHAPTER 28-5  
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners;
  - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
  - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
  - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
  - (f) A demand for the relief to which the petitioner deems himself entitled; and
  - (g) Such other information which the petitioner contends is material.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on May 11, 1988.

FILED AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(9), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

Martha Jane Wise  
Clerk

May 11, 1988  
Date

State of Florida  
Department of Environmental Regulation  
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Monsanto Chemical Company to construct/modify a Maleic Anhydride Plant. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation  
Northwest District  
160 Governmental District  
Pensacola, Florida 32501-5794

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation  
and  
Preliminary Determination

Monsanto Chemical Company  
Escambia County

Permit No. AC 17-145652  
Maleic Anhydride Facility Modification

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

May 9, 1988

I. NAME AND ADDRESS OF APPLICANT

Monsanto Chemical Company  
P.O. Box 12830  
Pensacola, Florida 32575

II. REVIEWING AND PROCESSING SCHEDULE

Date of Receipt of Application: February 18, 1988

Application Completeness Day: March 10, 1988

III. FACILITY INFORMATION

III.1 Facility Location

The source is located at 3000 Old Chemstrand Road in Cantonment, Escambia County, Florida. The UTM coordinates of the plant are Zone 16, 476.7 km East and 3384.5 km North.

III.2 Standard Industrial Classification Code (SIC)

This facility is classified as follows:

Major Group No. 28 - Chemicals and Allied Products

Group No. 286 - Industrial Organic Chemicals

Industry No. 2865 - Cyclic (Coal Tar) Crudes and Cyclic Intermediates, Dyes, and Organic Pigments (Lakes and Toners).

III.3 Facility Category

Monsanto Chemical Company is a a major emitting facility because emissions of volatile organic compounds and other criteria pollutants exceed 100 TPY. The proposed project will increase actual emissions of volatile organic compounds and carbon monoxide by 39.9 TPY and 96.4 TPY respectively. This facility category is on the list of 28, Major Facility Category (Chemical Process Plant), Table 500-2, Chapter 17-2, FAC.

IV. PROJECT DESCRIPTION

The applicant is proposing to increase production of the existing maleic anhydride plant from 130 million pounds per year to 260 million pounds per year. Increased air compression capacity will be used to increase the facility production design capacity. The air compression capacity of the plant will increase from  $7.2 \times 10^6$  standard cubic feet per hour (scfh) to  $11.3 \times 10^6$  scfh. There is no change to the size or number of reactors in this plant.

#### IV.1 Process Description

In the manufacture of maleic anhydride, compressed air and butane are reacted in the presence of a catalyst. The air supplies oxygen for conversion of butane to maleic anhydride. Four reactors are used in the existing plant. The reaction is not 100% efficient. Butane not converted to maleic anhydride is oxidized to water, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and traces of other reaction products. Off gases from the process contain primarily water (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), nitrogen (N<sub>2</sub>) and unreacted butane.

The maleic anhydride product is separated from the waste gas stream in the product separators and then stored until it is refined by distillation. The refined product is sent to product storage.

The off-gases from the reactors are passed through two existing boilers (No. 7 and No. 8) for incineration of the CO and VOC. Normal flow of waste gases is from Reactors No. 1 and No. 2 to Boiler No. 7, and from Reactors No. 3 and No. 4 to Boiler No. 8.

#### V. Rule Applicability

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The facility site is in an area, Escambia County, designated attainment for all pollutants in accordance with Rule 17-2.420, Florida Administrative Code (FAC) except for sulfur dioxide. The area is unclassified for sulfur dioxide (Rule 17-2.430(2), FAC). Monsanto Chemical Company is classified as a major facility. The existing facility has the potential to emit greater than 100 tons per year of particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), and carbon monoxide (CO).

This project, Maleic Anhydride Production Facility Modification, is exempt from the New Source Review Requirements of the Prevention of Significant Deterioration, Rule 17-2.500, because the net emission increases of VOC and CO are 39.9 and 96.4 ton per year respectively, Rule 17-2.500(2)(e)4., FAC.

This project shall be permitted under Rule 17-2.520, Sources not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. The proposed source shall comply with Rules 17-2.700, Stationary Point Sources Emissions Test Procedures, 17-2.620, General Pollutant Emission Limiting Standards, 17-2.240, Circumvention, 17-2.250, Excess Emissions, and 40 CFR, Part 60 Subpart VV, NSPS for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry.



For a future modification, this facility may be subject to a Prevention of Significant Deterioration Review, Rule 17-2.500, if the net increase of emissions of any criteria pollutant is equal to or greater than the significant emission rates listed in Table 500-2, FAC.

## VI. Emissions Summary

The operation of the maleic anhydride production facility will produce emissions of VOC and CO to the atmosphere.

Table 1 summarizes the potential to emit all affected pollutants regulated under the Clean Air Act for this source. These permitted emissions are in compliance with all applicable requirements of Chapter 17-2, FAC.

Table 2 shows a summary of the existing and proposed emissions for the venting system for this facility.

### VI.1 Air Quality Analysis

From a technical review of the application, the Department has determined that the modification and operation of this source will not have an adverse impact on Florida's ambient air quality.

### VI.2 Air Toxics Information

Currently, the Department is developing acceptable ambient concentrations for toxic substances. Specifically, chemicals classified as Category A (carcinogens and highly toxic substances) and Category B (moderately toxic substances).

It has been determined that the public health will not be endangered if the concentration of a toxic pollutant in the air does not exceed an acceptable ambient concentration (AAC).

In the event toxics emission limits are set during the term of this permit or any subsequent permit, the Department may seek modification of the permit pursuant to Rule 17-4.08. FAC.

Maleic Anhydride is considered a Category A contaminant. Its threshold limit value (TLV) is 0.25 ppm. Emissions from this process, as stated by the applicant, are below 1 ton per year. These emissions are mainly from product storage. An acceptable ambient concentration was not determined for this compound.

Butane emissions were modeled to determine their maximum ambient air impact. The model showed a maximum 8-hour concentration of 1.26 ug/m<sup>3</sup>. The TLV for butane is 1900 mg/m<sup>3</sup>. The acceptable ambient concentration is 38,000 ug/m<sup>3</sup>.

Calculating the impact of the butane emissions with the data

furnished in this application shows the ambient air concentration resulting from operation of the modified plant will be less than the acceptable ambient concentration (AAC).

#### VII. CONCLUSION

Based on the review of the data submitted by Monsanto Chemical Company, the Florida Department of Environmental Regulation (FDER) concludes that compliance with all applicable state air quality regulations will be achieved by the modified maleic anhydride plant provided certain specific conditions are met. The impact of operating the modified maleic anhydride plant will not cause or contribute to a violation of any ambient air quality standard.

Table 1  
 Summary of Emissions  
Maleic Anhydride Plant

	VOC		CO		NOx
	<u>lb/hr</u>	<u>TPY</u>	<u>lb/hr</u>	<u>TPY</u>	<u>TPY</u>
Existing Allowable Emission Rates	110(a) 143(b)	398.6	148(a) 183(b)	648.2	1358(e)
Existing Actual Emission Rates	0.96(c)		6.5(c)		
Proposed Allowable Emission Rates	9.1 (d)	39.9(d)	22 (d)	96.4(d)	1358
Significant Emissions Increase	40		100		40

- 
- (a) Maximum 24-hour emission rate
  - (b) Maximum 1-hour emission rate
  - (c) Source: ESE, 1983 Demonstration study
  - (d) Maleic Anhydride production plant contributes to an additional 9.1 lb/hr and 39.9 TPY VOC and 22 lb/hr and 96.4 TPY CO to the existing boilers No. 7 and No. 8 permitted emissions.
  - (e) Federal permit PSD FL-055

Table 2  
Venting Emissions

	<u>VOC</u> <u>lb/hr</u>	<u>CO</u> <u>lb/hr</u>
Existing and Proposed Emission Limits	1750 (a) 875 (b)	1750 (a) 875 (b)

Reported Venting Emissions

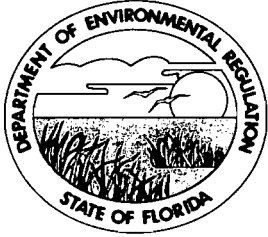
<u>Year</u>	<u>VOC (TPY)</u>	<u>CO (TPY)</u>
1985	69.3	60.8
1986	115.7	101.2
1987	111.2	98.8

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(a) Venting emission limits during startup and malfunction

(b) Venting emission limits during periods of shut down

Venting emission rates will not increase as a result of this project.



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:  
Monsanto Company  
P. O. Box 12830  
Pensacola, Florida 32575

Permit Number: AC 17-143652  
Expiration Date: November 30, 1990  
County: Escambia  
Latitude/Longitude: 30° 35' 28" N  
87° 14' 25" W  
Project: Maleic Anhydride  
Plant Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modification of a maleic anhydride plant. Emissions of volatile organic compounds (VOC) and carbon monoxide (CO) from this process are controlled by incinerating through existing boilers No. 7 and No. 8. The plant is located near Cantonment, Escambia County, Florida. The UTM coordinates of this source are Zone 16, 476.7 km East and 3384.5 km North.

Construction shall be in accordance with the permit application and plan, documents, amendments, and drawings submitted, except as noted in the Preliminary Determination or the Specific Conditions.

#### Attachments:

1. Application to Operate/Construct Air Pollution Sources, DER Form 17-202(1) dated February 18, 1988.
2. Monsanto Chemical Company's letter dated March 8, 1988.

**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**GENERAL CONDITIONS:**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.



**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. This permit supersedes operating permit No. AO 17-77464.
2. This plant is allowed to operate continuously (8760 hours per year).
3. Maximum contribution of the maleic anhydride plant to the VOC emissions from the boilers used to control the plant shall not exceed 9.1 lbs per hour and 39.9 tons per year.
4. Maximum contribution of the maleic anhydride plant to the CO emissions from the boilers used to control the plant shall not exceed 22 lbs per hour and 96.4 tons per year.

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143776  
Expiration Date: March 1, 1991

**SPECIFIC CONDITIONS:**

5. Due to the increase in VOC and CO emissions as a result of discharging the off-gases from the maleic anhydride plant to boilers No. 7 and No. 8, the operating permits for these boilers (No. 7 and No. 8) shall be modified to reflect this change.

6. During start-up, shutdown, and control system malfunction the source must comply with the following:

- a. The emissions will not exceed 1,750 pounds of either VOC (calculated as butane) or CO/reactor-hr for start-ups and malfunctions; 875 lbs of either VOC or CO/reactor-hr for shutdowns.
- b. No more than 1 1/2 hours shall be used for an individual reactor start-up or shutdown.
- c. No more than 8 reactor-hours for a total production start-up.
- d. No more than 6 reactor-hours during a control system malfunction to allow sufficient time to trouble shoot and correct the problem.

7. The maximum gas flow rate from the maleic anhydride plant to each boiler (No. 7 and No. 8) shall not exceed  $5.65 \times 10^6$  scf/hr ( $11.3 \times 10^6$  scfh total to both boilers).

8. The maximum air compression capacity of the system shall not exceed  $11.3 \times 10^6$  standard cubic feet per hour.

9. Maximum maleic anhydride production shall not exceed 260 million pounds per year.

10. The permittee shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of carbon monoxide concentration in the flue gases from each of the two modified steam generators (Boilers No. 7 and 8).

The continuous monitoring system must be able to perform, at a minimum, one CO analysis every 15 minutes.

The permittee shall also monitor and record: (1) process off-gas flow rate, (2) fuel flow rate, (3) combustion air flow rate, (4)

PERMITTEE:  
Monsanto Company

Permit Number: AC 17-143652  
Expiration Date: November 30, 1990

**SPECIFIC CONDITIONS:**

furnace temperature, (5) operating time of each reactor, (6) flue gas temperature in each boiler and (7) other process parameters or information necessary for a calculation of the total flue gas volumetric flow rate from each steam generator.

The flue gas temperature in each modified steam generator shall be maintained at or above 1800°F while any amount of maleic anhydride plant off-gas is being incinerated in it. Operation below 1800°F shall be allowed only if specific performance tests have been conducted to demonstrate compliance at or below the specific operating furnace temperature.

11. Compliance with the VOC and CO emission limits standards shall be determined by performance tests conducted in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8 (b) as follows:

- a. Method 1. Sample and Velocity Traverses
- b. Method 2. Volumetric Flow Rate
- c. Method 3. Gas Analysis
- d. Method 10. Determination of Carbon Monoxide Emissions from Stationary Sources
- e. Method 7. Determination of Nitrogen Oxides Emissions from Stationary Sources.
- f. Method 25 or 25A Determination of Volatile Organic Compound Emissions

The maleic anhydride process rate, variables and other routinely monitored steam generator process control parameters shall be recorded during compliance testing and made a part of the test report.

12. Test results will be the average of 3 valid runs. The Department's Northwest District office shall be notified 15 days in advance of the compliance tests. The tests will be conducted within 90 to 100% of permitted capacity.

13. To demonstrate compliance with the CO and VOC emission limits, the permittee shall continuously monitor CO concentrations, with an instrument that has a time lag of not more than 10 minutes and a frequency of not less than four measurements per hour. Calculate and record: (1) the flue gas volumetric flow rate; (2) CO emission, lb/hr, and; (3) estimated, VOC emission, lb/hr from each of two steam generators. Alarms shall be installed to indicate process operation outside allowable emission limits.

**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**SPECIFIC CONDITIONS:**

14. If visible emissions from product storage tanks exceed 5 percent opacity at maximum operating rate, the Department may require tests and/or air pollution controls to be installed on these tanks. Tests shall be conducted in accordance with EPA Method 9, Visual Determination of Opacity of Emissions from Stationary Sources.

15. Sampling procedures used to determine compliance shall be as specified in Rule 17-2.700, Stationary Point Sources Emissions Test Procedures.

16. Any violation of permit conditions shall be immediately reported to the Department's District office in Pensacola by telephone. The permittee shall keep continuous recording information available for Department inspection for two years.

17. The plant shall not be operated at the higher production rate until EPA modifies the federal permit to construct this source (PSD-FL-055).

18. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, the Department must be notified in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit, (Rule 17-2, FAC).

19. To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, compliance test results, and Certificate of Completion to the Department's Northwest District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate, (Rules 17-2 and 17-4, FAC).

20. If the construction permit expires prior to the permittee requesting an extension or filing an application for a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application, (Rule 17-4, FAC).

**PERMITTEE:**  
Monsanto Company

**Permit Number:** AC 17-143652  
**Expiration Date:** November 30, 1990

**SPECIFIC CONDITIONS:**

21. Upon obtaining a permit to operate, the permittee will be required to submit annual reports on the actual operating rates and emissions from the facility. Annual reports shall be sent to the Department's Northwest District office in Pensacola.

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_

**STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION**

\_\_\_\_\_  
Dale Twachtmann, Secretary

**Monsanto**

PM  
4.8.88  
Gonzalez, FL

File Copy

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575  
Phone: (904) 968-7000

AC 17-145652  
PSD-FL-131

RECEIVED

APR 11 1988

DER-BAQM

April 8, 1988

PSD Coordinator  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear PSD Coordinator:

Attached is the report of Excess Emissions from Monsanto's Maleic Anhydride Production Facility, Permit AO17-77464, for the first quarter of 1988.

If you have any questions concerning this information, please contact me at 904/968-7770.

Sincerely,

*R. T. Cannon*

R. T. Cannon, General Engineer  
Environmental Control

Attachment

Copied: CHF/BT  
Teresa Heron  
2d Middlebart, NW Dist  
Wayne Oranor, EPA } 4.12.88 (ms)

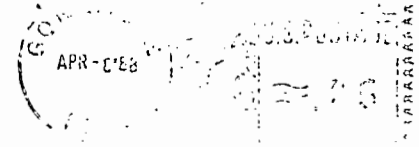
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# Monsanto

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**MONSANTO COMPANY**

P. O. Box 12830  
Pensacola, Florida 32575

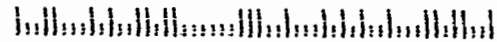


4-12-88

~~CAP~~  
~~BA~~ } FYI

(M)

PSD COORDINATOR  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE FL 32301-8241



MONSANTO PENSACOLA

MALEIC ANHYDRIDE PLANT

PERMIT AO17-77464

QUARTERLY EXCESS EMISSION REPORT  
FOR THE FIRST QUARTER 1988

1. No instances of excess emissions of CO from the boilers occurred.
2. No instances of excess venting occurred.



*file copy*

PM  
3.17.88  
atlanta, GA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

MAR 16 1988

RECEIVED

MAR 24 1988

DER-BAQM

4APT-APB

M. V. Janes  
Bureau of Air Quality  
Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Re: Monsanto Chemical Company (PSD-FL-131)

Dear Ms. Janes:

This is to acknowledge receipt of a copy of the modification packet for the proposed increase in air flow rate to the existing #7 and #8 boilers by the Monsanto Chemical Company. We have reviewed the packet and would like to provide one comment.

Although Monsanto indicates that the exiting CO and VOC emissions will be significantly reduced, Monsanto does not address any possible increases in NO<sub>x</sub> emissions. As you may know, NO<sub>x</sub> is formed chiefly by the oxidation of atmospheric nitrogen. Thus, the combustion of the proposed additional air flow in both of the #7 and #8 boilers may contribute to significant increases in NO<sub>x</sub> emissions. Thus, please request Monsanto to address this NO<sub>x</sub> concern and any other pollutants if applicable.

Thank you for the opportunity to provide you with our comments. If you have any additional information or comments, please contact me or Gary Ng of my staff at (404) 347-2864.

Sincerely yours,

*Wayne J. Amsm / Acting for*

Bruce P. Miller, Chief  
Air Programs Branch  
Air, Pesticides, and Toxics  
Management Division

Copied: Teresa Huan }  
CHF/BT } 3 28 88 (ms)

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION IV  
345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

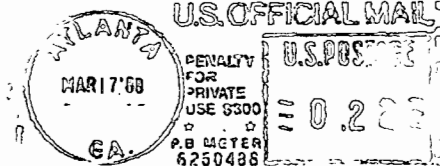
AIR-4

3-28-88

~~147~~ > FBI

(14)

Ms. M. V. Janes  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400





3-17-88  
Atlanta, GA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV  
345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

MAR 16 1988

RECEIVED

MAR 24 1988

DER-BAQM

4APT-APB

M. V. Janes  
Bureau of Air Quality  
Management  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

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Thank you for the opportunity to provide you with our comments. If you have any additional information or comments, please contact me or Gary Ng of my staff at (404) 347-2864.

Sincerely yours,

*Wayne J. Amsen / Acting for*

Bruce P. Miller, Chief  
Air Programs Branch  
Air, Pesticides, and Toxics  
Management Division

Copied: Teresa Amon  
CHFIBT } 3 2888 (m)

# Monsanto

2265

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575  
Phone: (904) 968-7000

RECEIVED

MAR 10 1988

VIA OVERNIGHT MAIL

March 8, 1988

DER-BAQM

1031

Ms. Teresa M. Heron  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Ms. Heron:

Following up our telephone conversation of March 7, 1988, I have enclosed a check for \$550.00 to cover the permitting fee for the Maleic Anhydride Modification Application. Ms. Maggie Janes has received a total of \$200.00 to date for this application. This check brings the total submitted up to the \$750.00 which you indicated was the appropriate fee.

Also enclosed for your reference is a copy of the DER Construction Permit, which we discussed.

If you have any questions, please call me at 904/968-8725.

Sincerely,



Bruce P. McLeod  
Senior Specialist  
Environmental Control

Enclosures

Copied: Teresa Heron } 3-11-88 (my)  
Ed Middleman }

RECEIVED  
DER-MAIL ROOM  
1988 MAR 10 AM 11:17

1112.BPM

160 GOVERNMENTAL CENTER  
PENSACOLA, FLORIDA 32501



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

ROBERT V. KRIEGLER  
DISTRICT MANAGER

STATE OF FLORIDA

**DEPARTMENT OF ENVIRONMENTAL REGULATION**  
**NORTHWEST DISTRICT**

March 31, 1981

RECEIVED

MAR 10 1988

DER-BAQW

Mr. Joe Vick  
Environmental Control Superintendent  
Monsanto Textiles Company  
Post Office Box 12830  
Pensacola, Florida 32575

Dear Mr. Vick:

RE: Permit AC17-27953, Maleic Anhydride Plant

Pursuant to Section 120.57, Florida Statutes, and Section 17-4.07, Florida Administrative Code, the Department of Environmental Regulation hereby issues a modification to the noted permit. The Department regulates this activity under the authority granted by Section 403.087, F.S. The Department has modified the permit for the following reasons:

1. The permit was issued on September 10, 1980. The permittee petitioned for a hearing on September 23, 1980, because of objections to emission limits, furnace operating criteria, and ambient air monitoring requirements.
2. The requirements for monitoring ambient air quality have been deleted as requested by the permittee. The emissions from this plant do not have a significant impact on air quality projected for 1983, the year of start up, and sufficient ambient air data will be available to the Department.
3. The furnace operating criteria have been deleted as requested by the permittee. It is mutually agreed that these criteria are more properly a consideration for the operation permit for this facility and not the construction permit. They will be experimentally determined after initial start up.

Mr. Joe Vick  
March 31, 1981  
Page 2

4. The emission limits were established in a BACT determination by the Department. After consideration of additional data submitted by the permittee and discussions with EPA staff, the Department amended the BACT determination. New limits have been established, along with an evaluation program designed to show the optimum operating conditions which will enable the Department to set emission limits for the operation permit.

5. A condition authorizing excess emissions during start up, shut down and malfunctions has been added as the permittee requested on February 6, 1981, with limits as included in the amended BACT determination.

6. An evaluation period of 270 days after initial start up, to be extended for delays beyond the permittee's control, has been added as the permittee requested on February 6, 1981.

7. The expiration date has been extended as the permittee requested on March 12, 1981.

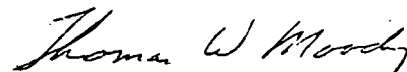
8. It is our understanding that the times and conditions are acceptable to you.

Should you object to this modified permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, F.A.C., (enclosed). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted the modified permit and waived your right to request an administrative hearing on this matter.

Acceptance of the modified permit constitutes notice and agreement that the Department will periodically review this modification for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,



Thomas W. Moody, P.E.  
Special Programs Supervisor

TWM/tms  
Enclosures

RULES OF THE ADMINISTRATION COMMISSION  
MODEL RULES OF PROCEDURE  
CHAPTER 28-5  
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

PART II  
FORMAL PROCEEDINGS  
A) PREHEARING PROCEDURES

28-5.201 Initiation of Formal Proceedings.

- (1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination.
  - (c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision.
  - (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
  - (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;
  - (f) A demand for relief to which the petitioner claims himself

PERMIT NO.: AC17-27953

APPLICANT: Monsanto Textile Company

**SPECIFIC CONDITIONS:**

14. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction.
15. The Department shall be notified within 15 days after construction is completed and prior to testing to allow witnessing of tests.
16. The applicant shall retain the engineer of record for the inspection of this project. Upon completion, the engineer shall inspect for conformity to the permit application and associated documents. A Certificate of Completion (DER Form 17-1.122 (20) attached) shall be submitted with the compliance test results and a fee of \$20 as application for an operation permit. These are to be submitted within 60 days after completion of construction.
17. Satisfactory ladders, platforms, monitoring and other safety devices shall be provided/available as well as necessary ports to facilitate the carrying out of an adequate sampling program.
18. Maximum allowable volatile organics compounds (VOC) emissions are 110 pounds per hour calculated as butane. The computation of these emissions for purposes of demonstrating compliance shall consist of the average of 24 consecutive 1-hour periods, during which emissions shall not exceed 143 pounds in any single hour.
19. Maximum allowable carbon monoxide emissions are 148 pounds per hour. The computation of these emissions for purposes of demonstrating compliance shall consist of the average of 24 consecutive 1-hour periods, during which emissions shall not exceed 183 pounds in any single hour.
20. Visible emissions from product storage tanks shall not exceed 20 percent opacity at maximum operating rate.
21. Visible emission tests are required for product storage tanks to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method 9 as published in CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year commencing 45 days from completion of construction. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified prior to testing to allow witnessing.
22. The amended Department BACT Determination dated March 25, 1981 is attached hereto and made a part of this permit.
23. The emission limits for VOC and CO (Conditions 18 and 19) are expressly provided for the initial evaluation period covered by this construction permit and shall remain in effect until modified by the Department based on certified results of experiments (see Condition 24 below) to be conducted by the permittee which demonstrate the actual emissions that can reasonably and consistently be achieved over the range of expected process operating conditions.



PERMIT NO.: AC17-27953  
APPLICANT: Monsanto Textile Company

24. The experiments to provide the certified results referred to in Condition 23 above shall be diligently pursued by the permittee with a high priority and completed within 270 days after the initial start up of the facility. The completed experiments shall include final certified reports submitted for the determination of the limits to be required for an operation permit. This 270 day evaluation period may be extended by the term of any delays resulting from any cause beyond the reasonable control of the permittee provided such delay periods are started and ended with a prior or simultaneous notification to the Department and are at least 24 hours per day in length. The completion of this evaluation period shall constitute completion of construction for the application of Conditions 16, 21 and 26 of this permit.

25. During the evaluation period, the permittee shall perform experiments to determine optimum operating conditions for all parameters affecting VOC or CO emissions. The permittee shall plan, schedule and report these experiments with the minimum requirements outlined in "Demonstration Test Objectives (1) through (2)(e)" of the amended BACT Determination.

26. Upon completion of the evaluation period, the Department shall establish VOC and CO emission limits and operating conditions based on an evaluation of the experiments performed and reports submitted during the period. Compliance tests are required for boilers #7 and #8 to provide reasonable assurance that the units are capable of continuing compliance with these limits at the desired maximum operating rate. Tests shall be conducted in accordance with EPA Method 25 or an equivalent method with prior Department approval for VOC and EPA Method 10 for CO. The averaging period shall be as stated in conditions 18 and 19.

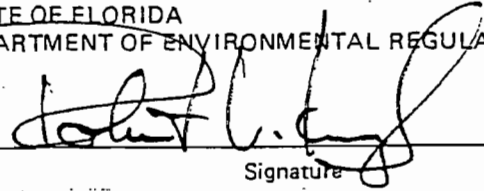
27. Item (2)(f) of the attached amended BACT Determination is a condition of this permit. As an additional requirement a log shall be maintained of all periods of allowed excess emissions under this condition. This log shall show the beginning and end of each such allowed period, the category (1, 2, or 3) of the allowed period, and estimates of the total emitted VOC and total emitted CO for each period. This log shall be available for Department inspection upon request. Summarized statistics from this log shall be submitted with the Certificate of Completion (Condition 16 above).

Modified this 31st day of March, 1981  
Issued this 10th day of September, 1980

Expiration Date: December 31, 1983

5 Pages Attached.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
Signature

Robert V. Kriegel  
District Manager

Best Available Control Technology (BACT) Determination  
Amendment  
Monsanto Company  
Escambia County

The proposed project is the construction of a butane-based maleic anhydride plant (Permit No. AC 17-27953).

Previous BACT Determination by DER:

Pollutant	Emission Limits
Organic Emissions:	Maximum 10 lbs/ton maleic anhydride produced; and Maximum 76 lbs/hr from process and both boilers with not over 38 lbs/hr emitted from either boiler stack; and Minimum 98% destruction of organics from process to complete products of combustion.

These emissions are to be measured by EPA's proposed Reference Method No. 25 for "Determination of Total Gaseous Nonmethane Organic as Carbon" or by a State approved method.

Carbon Monoxide Emissions:	Maximum 15.5 lbs/ton maleic anhydride produced; and 118 lbs/hr from process and both boilers with not over 59 lbs/hr emitted from either boiler stack; and Minimum 98% oxidation of CO and CO <sub>2</sub> in the boilers.
----------------------------	--

Original BACT Determination Requested by the Applicant:

Maximum hydrocarbon emissions:	113 lbs HC/hr (107 lbs/hr from process and 6 lbs/hr from boilers)
--------------------------------	---

Maximum carbon monoxide emissions: 162 lbs CO/hr (132 lbs/hr from process and 30 lbs/hr from boilers).

Above emissions based on a 97% - 98.5% destruction efficiency of pollutants from the process by the boilers.

BACT Revision Requested by the Applicant:

These figures have since been modified in comments submitted by the company to EPA on January 20, 1981, with copies submitted to DER January 27, 1981. In this document Monsanto requested limits as follows:

"The total emissions of volatile organic compounds (VOC) from the process through both modified steam generators shall not exceed 107 lb/hr measured as butane and determined as an average over 24 consecutive 1-hour periods of operation. Further, total VOC shall not exceed 143 pounds during any 1-hour period.

The total emissions of carbon monoxide (CO) from the process through both modified steam generators shall not exceed a maximum of 132 pounds per hour, averaged over 24 consecutive 1-hour periods. Further, total carbon monoxide (CO) emissions from both modified steam generators shall not exceed 183 pounds during any 1-hour period".

A number of factors have been introduced by Monsanto and discussed as bases for the requests for emission limit changes:

(1) Uncertainty exists for results of scale-up from pilot operations due to the presence of combustion intermediates and low oxygen content of offgases which emphasize the critical role of mixing in burners and flame zone.

(2) Process offgas rate, at any given time, is independent of the maleic anhydride production rate due to provision for intermediate storage of in-process material.

Justification of DER Amended Determination:

While a number of the requests based on these factors have some merit, arguments have been presented with sufficient overlap that complete agreement by DER with all of the company's requests would result in a virtually unenforceable permit. It is clear, however, that while agreements exist on the use of existing boilers #7 and #8 to incinerate process offgases as the technology constituting BACT, disagreements exist on the actual degree of emission reduction that can be obtained and the resulting emissions. Further, sufficient

Page Three

doubt has been cast upon the validity of available pertinent data that the validity of any determination based on that data would be open to question.

"Best Available Control Technology" (BACT) is defined in 17-2.02(15) as:

Emission limitation based on the maximum degree of reduction of each pollutant emitted which the Department, taking into account energy, environmental and economic impacts, and other costs, determines, on a case by case basis, is achievable through application of production processes and available methods, systems, and techniques for control of each such pollutant.

The energy and economic impacts are clear cut since incineration of offgases will reduce the requirements for using other fuels and allow the use of the existing boilers with a minimum of physical modification. If the environmental impacts are addressed through interim emission limits which will ensure sufficient reduction of VOC and CO emissions to protect the environment, then the "maximum degree of reduction" can be determined through testing designed to produce validated data.

Amended DER BACT Determination:

Maximum VOC emissions: 110 pounds per hour calculated as butane. Emissions to be measured by EPA's Reference Method No. 25 for "determination of Total Gaseous Non-methane Organic as Carbon" or an equivalent method with prior approval of the Department. Determination shall be an average of 24 consecutive 1-hour periods except that during any one hour period emissions shall not exceed a total of 143 pounds of VOC from both steam generators.

Maximum carbon monoxide emissions: 148 pounds per hour over 24 consecutive 1-hour periods except that during any one hour period emissions shall not exceed a total of 183 pounds from both modified steam generators.

These emission limits for CO and VOC are expressly provided for the initial testing period to be covered by the Construction Permit and shall continue until modified based on certified results of tests to be conducted by the permittee and which demonstrate the actual emissions that can reasonably and consistently be achieved over the range of expected process operating conditions. The tests to provide the certified results referred to above shall be diligently pursued by the permittee with a high priority and completed within the term of the Construction Permit.

In order to minimize emissions during testing, tests are to be conducted at the lowest rates possible consistent with expeditious attainment of test objectives. Final certified results should include verification by operation within 10% of maximum maleic anhydride production rate.

Demonstration Test Objectives:

(1) Following startup of the facility and as soon as operation is stabilized to the extent that meaningful test results can be obtained, the permittee shall develop and initiate a test program which shall include, but not necessarily be limited to:

(a) Burner and flame zone mixing evaluations to clearly establish "...the maximum degree of reduction of each pollutant emitted..." as required by BACT.

(b) Identification and determination of the effects on VOC and CO emissions of operating parameters which have a significant effect on emissions.

(c) Determination of actual emission levels of CO and VOC which can be achieved over the expected operating range of the parameters investigated above and resulting from any improvements due to burner and flame zone modifications.

(d) Establishment of emission reduction factors for reduced average maleic anhydride production rates.

(2) In addition:

(a) Monsanto will install and calibrate continuous CO monitors on both stacks.

1. Individual stack emissions records based on CO concentration and gas flow will be maintained to facilitate manual stack testing for compliance.

2. Overall CO compliance will be based on total from both stacks.

(b) When correlation between CO and VOC emissions is established, VOC compliance will be determined as in (a) above, provided that such waiver of direct compliance testing shall be subject to the provisions of 17-2.23.

(c) Indications of exceedances based on data derived as in (a) and (b) above will be accepted unless demonstration is made through manual testing that emission levels are in compliance.

Page Five

(d) During the course of testing Monsanto shall submit monthly test reports to Northwest District, DER, with copy to the Bureau of Air Quality Management. In addition to summary of test results and conclusions for the month past, a discussion of plans and objectives for coming month is to be included.

(e) Results and conclusions of this test program submitted by Monsanto must be certified by a third party with demonstratable expertise in the field.

(f) During startup, shutdown and malfunction while testing under the construction permit, the emission limits shall not apply for:

1. Up to 1½ reactor hours during an individual startup or shutdown;

2. Up to 8 reactor hours for a total production startup;

3. Up to 6 hours during a malfunction to allow sufficient time to troubleshoot and correct the problem;

provided the emissions will not exceed 1750 pounds of either VOC or CO per reactor hour for startups and malfunctions and 875 pounds of either VOC or CO per reactor hour for shutdowns. It is intended that these figures be verified/ refined during the test program to establish an annual budget of startup and shutdown reactor hours for the Operation Permit.

Details of the Analysis May be Obtained by Contacting:

William Thomas  
Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Recommended by:

\_\_\_\_\_  
Steve Smallwood, Chief, BAQM

Date: \_\_\_\_\_

Approved by:

\_\_\_\_\_  
Victoria Tschinkel, Secretary

Date: \_\_\_\_\_  
3/25/81

TO: ROGER SCHWENKE  
FROM: JOE VICK-MONSANTO-PENSACOLA

9/18/80

180 GOVERNMENTAL CENTER  
PENSACOLA, FLORIDA 32501



BOB GRAHAM  
GOVERNOR

JACOB D. VARN  
SECRETARY

ROBERT V. KRIEGLER  
DISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

SEP 1 0 1980

Mr. J. J. Vick  
Environmental Control Supervisor  
Monsanto Textile Company  
P. O. Box 12830  
Pensacola, Florida 32575

RE: Maleic Anhydride Plant

Dear Mr. Vick:

Enclosed is Permit Number AC17-27953, dated SEP 1 0 1980,  
to construct the above named source  
issued pursuant to Section 403.087, Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, Florida Administrative Code, (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

Thomas W. Moody, P. E.  
Special Programs Supervisor

TWM/s  
Enclosure

RULES OF THE ADMINISTRATION COMMISSION  
MODEL RULES OF PROCEDURE  
CHAPTER 28-5  
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

PART II  
FORMAL PROCEEDINGS

28-5.201 Initiation of Formal Proceedings.

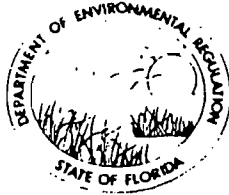
- (1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.
- (2) All petitions filed under these rules should contain:
  - (a) The name and address of each agency affected and each agency's file or identification number, if known;
  - (b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination;
  - (c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision;
  - (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
  - (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;
  - (f) A demand for relief to which the petitioner deems himself entitled; and
  - (g) Other information which the petitioner contends is material.

\*\*\*\*\*

A petition may be denied if the petitioner does not state adequately a material factual allegation, such as a substantial interest in the agency determination, or if the petition is untimely. (Section 28-5.201(3) (a), FAC)



160 GOVERNMENTAL CENTER  
PENSACOLA, FLORIDA 32501



BOB GRAHAM  
GOVERNOR

JACOB D. VARN  
SECRETARY

ROBERT V. KRIEGL  
DISTRICT MANAGER

STATE OF FLORIDA

**DEPARTMENT OF ENVIRONMENTAL REGULATION**

NORTHWEST DISTRICT

APPLICANT:

Monsanto Textile Company

SEP 10 1980

Construction  
PERMIT/CERTIFICATION  
NO. AC17-27953

COUNTY: Escambia

PROJECT: Maleic Anhydride  
Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

Construction of a Maleic Anhydride Plant; organic and carbon monoxide emissions from this process are controlled by incinerating through existing Boilers #7 and #8.

Located: Intersection of SR292 and SR297, Pensacola, Escambia County

Latitude: 30° 35' 05", Longitude: 87° 14' 40"

PERMIT NO.: AC17-27953  
APPLICANT: Monsanto Textile Company

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions", and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT)
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC17-27953  
APPLICANT: Monsanto Textile Company

**SPECIFIC CONDITIONS:**

14. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction.
15. The Department shall be notified within 15 days after construction is completed and prior to testing to allow witnessing of tests.
16. The applicant shall retain the engineer of record for the inspection of this project. Upon completion, the engineer shall inspect for conformity to the permit application and associated documents. A Certificate of Completion (DER Form 17-1.122(20) attached) shall be submitted with the compliance test results and a fee of \$20 as application for an operation permit. These are to be submitted within 60 days after completion of construction.
17. Satisfactory ladders, platforms, monitoring and other safety devices shall be provided/available as well as necessary ports to facilitate the carrying out of an adequate sampling program.
18. Maximum allowable Organic emissions are: a) 10 pounds per ton of Maleic Anhydride produced; and b) maximum 76 pounds per hour from process and both boilers (#7 and #8) with not over 38.0 pounds per hour emitted from either boiler stacks, and c) a minimum of 98% destruction of organics from process to complete products of combustion.
19. Maximum allowable Carbon Monoxide emissions are: a) 15.5 pounds per ton of Maleic Anhydride produced, and b) 118 pounds per hour from process and both boilers (#7 and #8) with not over 59.0 pounds per hour emitted from either boiler stack, and c) a minimum of 98% oxidation of CO to CO<sub>2</sub> in the boilers.
20. Visible emissions from product storage tanks shall not exceed 20 percent opacity under maximum operating rate.
21. Organic and Carbon Monoxide emission tests are required for boilers #7 and #8 to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method Twenty-Five for Organics and Ten for Carbon Monoxide as published in 40 CFR-60, Appendix A or State approved equivalent method. Such tests shall be conducted once per year commencing within 45 days from initial operation. Results shall be submitted to the Department within 30 days after testing. The Department shall be notified prior to testing to allow witnessing.
22. Visible emission tests are required for product storage tanks to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year commencing 45 days from initial operation. Results shall be submitted to the Department within 30 days after testing. The Department shall be notified prior to testing to allow witnessing.

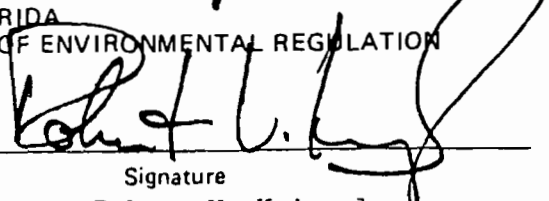
PERMIT NO.: AC17-27953  
APPLICANT: Monsanto Textile Company

- 23. The two steam generators shall operate at a minimum temperature of 2000°F and a residence time of 1.0 second.
- 24. The permittee shall install appropriate monitors for continuous monitoring of ambient air for Carbon Monoxide and Hydrocarbons. The permittee shall obtain prior siting approval from the Department and the monitor shall be installed and in operation prior to operation of this facility.
- 25. The permittee shall immediately report any violation of ambient air quality standards to the Department by telephone, and shall keep continuous recording information available for Department inspection for one year.

Expiration Date: July 1, 1983

Issued this 10th day of Sept, 19 80

Pages Attached.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
  
Signature  
Robert V. Kriegel  
District Manager

PAGE 4 OF 4

**Monsanto**

WORKING FUND ACCOUNT  
MONSANTO COMPANY  
PENSACOLA, FLORIDA

720 09745

62-20  
311

2265

03/07/88

5

\$550.00

**EXACTLY 550.00 CTS**

PAY  
TO THE  
ORDER  
OF

DEPARTMENT OF ENVIRONMENTAL REGULATION

Citibank (Delaware)



MONSANTO COMPANY, PENSACOLA, FLORIDA

72009745

P-10

03/07/88

THE ATTACHED CHECK IS IN PAYMENT OF THE FOLLOWING:

DEPARTMENT OF ENVIRONMENTAL REGULATION

MEMO	DATE	INVOICE NO.	AMOUNT	DEDUCTIONS & DISCOUNT	NET
Additional fee for Maleic Anhydride Modification Application - B.P. McLeod.	03/07/88		\$550.00		\$550.00

DETACH BEFORE DEPOSITING

CH 142

Sincerely,

Bruce P. McLeod  
Senior Specialist  
Environmental Control

Enclosures

AC 17-145652

1112.BPM

REC'D  
MAR 10 1988  
11:17

file

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ  
GOVERNOR  
DALE TWACHTMANN  
SECRETARY

March 3, 1988

Mr. Wayne Aronson, Chief  
Program Support Section  
U.S. EPA, Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

Dear Mr. Aronson:

RE: Monsanto Chemical Company  
Modification to a Major Source  
State Construction Permit Number: AC 17-145652  
New PSD Number: PSD-FL-131  
Past PSD Number: PSD-FL-055

Enclosed for your review and comment is the modification packet for the above referenced company. EPA issued the original federal PSD construction permit for this source. If you have any comments or questions, please contact Teresa Heron by March 19, 1988, at the above address or at (904)488-1344.

Sincerely,

*M. V. Janes*

Margaret V. Janes  
Bureau of Air Quality  
Management

/mj

cc: Ed Middleswart, NW Dist.

Enclosures

Express Mail # B 21515640

PM  
Feb. 18, 1988  
Pensacola, FL  
Sub Code 05

Full Copy

# Monsanto

MONSANTO CHEMICAL COMPANY  
P. O. Box 12830  
Pensacola, Florida 32575  
Phone: (904) 968-7000

RECEIVED  
DER - MAIL ROOM  
1988 FEB 19 AM 12:39

DER

FEB 19, 1988 (m)

BAQM

February 17, 1988

Mr. Clair Fancy  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

Enclosed are four copies of a permit application for a modification of the Pensacola plant Maleic Anhydride Manufacturing Facility Permit AO17-77464.

Also enclosed is a check for \$100 to cover the application fee.

I can be reached at 904/968-8725, if there are questions concerning this permit application.

Sincerely,

Bruce P. McLeod  
Senior Specialist  
Environmental Control

Enclosures

Copied: Teresa Nixon  
Ed Middlewart, NW Dist } 2.23.88 (m)

1083.BPM

# POST OFFICE TO ADDRESSEE

**EXPRESS MAIL**  
NEXT DAY SERVICE



**B** 21515640

For Postal Use

ORIGIN		Postage	
Post Office ZIP Code	Date of Mailing	Rate	Postage & Fees
Initials of Receiving Clerk	Weight	Return Receipt Fee	
<input type="checkbox"/> Accepted for next day delivery <input type="checkbox"/> Accepted for this origin on other days of delivery at below rate and applicable surcharge for delivery by next day <small>(Default rate for local Express Mail per rate schedule directory for domestic destinations for domestic destinations)</small> <input type="checkbox"/> International Of Delivery Country Code			

**Account Number**  
(Using an authorized number indicates postage and fees paid.)  
Express Mail Corporate Account No.:  
Federal Agency Control No.:

For Customer Use

**FROM:**

U.S. AIR MAIL  
 1715 1/2  
 PENSACOLA FL 32575

DESTINATION	Date of Delivery	Time of Delivery
	2/8	12:30 P.M.

**X** Signature of Addressee or Agent

DELIVERY WAS ATTEMPTED	Date	Time
		A.M. P.M.

Signature of Delivery Employee

**WAIVER OF SIGNATURE AND INDEMNITY**  
I wish delivery to be made without obtaining the signature of the addressee or the addressee's agent and I authorize the delivery employee to sign that the shipment was delivered and understand that the signature of the delivery employee will constitute valid proof of delivery.  
SIGNED: \_\_\_\_\_

**ADDRESSEE'S COPY**

**TO:** Telephone Number: \_\_\_\_\_

MR. CLARK JENNY  
 DEPARTMENT OF ENVIRONMENTAL REGULATION  
 TWIN TOWERS OFFICE BUILDING  
 2600 BLAIR STONE ROAD  
 TALENHASSEE FL 32301-8241

Label 1

4-824; 164-825





**Monsanto**

WORKING FUND ACCOUNT  
MONSANTO COMPANY  
PENSACOLA, FLORIDA

720 09640

62-20  
311

02-17-88

\$100.00

**EXACTLY 100000 CTS**

PAY  
TO THE  
ORDER  
OF

DEPARTMENT OF ENVIRONMENTAL REGULATION

Citibank (Delaware)

*Martin A. Schellario*  
\_\_\_\_\_  
Martin A. Schellario

P-07

MONSANTO COMPANY, PENSACOLA, FLORIDA

02-17-88

72009640

THE ATTACHED CHECK IS IN PAYMENT OF THE FOLLOWING:

DEPARTMENT OF ENVIRONMENTAL REGULATION

MEMO	DATE	INVOICE NO.	AMOUNT	DEDUCTIONS & DISCOUNT	NET
Permit for modification of Maleic Anhydride Mfg. Facility	02-17-88		\$100.00		\$100.00

DETACH BEFORE DEPOSITING

CH 142

INVOICE NO. OR DATE	GROSS AMOUNT	DISCOUNT	INVOICE NO. OR DATE	GROSS AMOUNT	DISCOUNT
021288	100.00	0.00	068-7171		
PLEASE DIRECT INQUIRIES TO PENSACOLA FL (904) 968-7171					
MALEIC ANHYDRIDE CONSTRUCTION PERMIT APPLICATION FEE					

NON NEGOTIABLE  
 REMITTANCE ADVICE  
 This check is in full payment of  
 invoices or other charges listed

CH-16

Monsanto

COMPANY INVOICED \*MONSANTO COMPANY UNLESS OTHERWISE INDICATED

PN19	007379502-19-88	100.00	0.00	100.00
22 530005	VENDOR NO.	DATE	GROSS	DISCOUNT
22-530005				NET

**Monsanto**

MONSANTO COMPANY  
 ST. LOUIS, MISSOURI

2240

22-530005

VOID IF NOT CASHED WITHIN SIX MONTHS

PAY TO THE ORDER OF

DEPARTMENT OF ENVIRONMENTAL  
 REGULATION  
 TWIN TOWERS OFFICE BLDG  
 2600 BLAIR STONE RD  
 TALLAHASSEE FL 32301

DATE

AMOUNT

02-19-88

\$100.00\*\*\*

MERCANTILE BANK

*Signature*

AC 17-143052

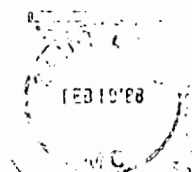
80-436(3)  
 0815

1031

224

**Monsanto**

800 N. Lindbergh Boulevard  
St. Louis, Missouri 63167



RECEIVED  
MAIL ROOM  
1988 FEB 22 PM 11:12

2240

121



DEPARTMENT OF ENVIRONMENTAL REGULATION AC 17-145652



RECEIVED

FEB 19 1988

DER-BAQM

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution [ ] New<sup>1</sup> [ ] Existing<sup>1</sup>

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Monsanto Company COUNTY: Escambia

Identify the specific emission point source(s) addressed in this application (i.e. Lime  
Pensacola Plant Boilers #7 & #8 Emissions from Maleic Anhydride Facility  
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired)

SOURCE LOCATION: Street 3000 Old Chemstrand Road City Cantonment, FL 32533

UTM: East Zone 16 476.7 North 3384.5

Latitude 30° 35' 28"N Longitude 87° 14' 25"W

APPLICANT NAME AND TITLE: W.J. Board, General Supt., Governmental Affairs

APPLICANT ADDRESS: Monsanto Company P.O. Box 12830 Pensacola, Florida 32575

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Monsanto Company

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

\*Attach letter of authorization

Signed: WJ Board

W. J. Board, General Supt., Governmental Affairs  
Name and Title (Please Type)

Date: 2/12/88 Telephone No. (904) 968-7411

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Bruce P. McLeod, P.E.

Bruce P. McLeod  
Name (Please Type)

Monsanto Company  
Company Name (Please Type)

P.O. Box 12830, Pensacola, Florida 32575  
Mailing Address (Please Type)

Florida Registration No. 26956 Date: 2/12/88 Telephone No. (904) 968-8725

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Increase air compression capacity to the Maleic Anhydride Facility by approximately 42%. See attachment A, Project Description, for further details.

B. Schedule of project covered in this application (Construction Permit Application Only)  
Start of Construction upon permit issuance Completion of Construction 2½ years after

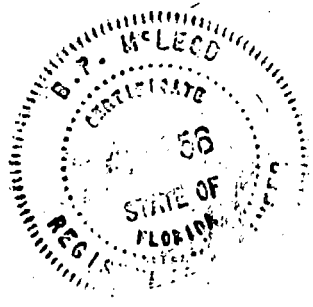
C. Costs of pollution control system(s): (Note: Show breakdown of estimated <sup>permit</sup> costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Will utilize existing equipment - no new pollution control equipment necessary.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

AC17-27953 Issued 9/10/80 Modified 3/31/81 Expired 12/31/83

A017-77464 Issued 3/2/84 Expires 1/1/89



E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  
if power plant, hrs/yr \_\_\_\_\_; if seasonal, describe: \_\_\_\_\_

F. If this is a new source or major modification, answer the following questions.  
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No  
a. If yes, has "offset" been applied? \_\_\_\_\_  
b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_  
c. If yes, list non-attainment pollutants. \_\_\_\_\_

2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? Yes (1)

5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? No

a. If yes, for what pollutants? \_\_\_\_\_

b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

(1) Compliance being maintained with 40 CFR, Part 60 Subpart VV

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Butane	N/A	N/A	N/A	

B. Process Rate, if applicable: (See Section V, Item 1)

- Total Process Input Rate (lbs/hr): N/A
- Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

(see Appendix A for emission calculations)

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
CO (1)	22.0 (2)	96.4	N/A	N/A	22.0 (2)	96.4	1
VOC (1)	9.1 (2)	39.9	N/A	N/A	9.1 (2)	39.9	1

(1) SEE ATTACHMENT B

(2) Annual average emission rate.

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

<sup>3</sup>Calculated from operating rate and applicable standard.

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Existing Boiler #7	CO	≥ 99.81%	N/A	Attachment B
	VOC	≥ 99.87%	N/A	"
Existing Boiler #8	CO	≥ 99.81 %	N/A	"
	VOC	≥ 99.87%	N/A	"

E. Fuels Not Applicable

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

\*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: \_\_\_\_\_ Percent Ash: \_\_\_\_\_

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average \_\_\_\_\_ N/A \_\_\_\_\_ Maximum \_\_\_\_\_

G. Indicate liquid or solid wastes generated and method of disposal.

None generated



H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: Boilers #7 and #8  
100 ft. Stack Diameter: 11.6 ft  
 Gas Flow Rate: 300,000 ACFM 175,000 DSCFM Gas Exit Temperature: 350 °F  
 Water Vapor Content: 10 % Velocity: 47.3 FP

SECTION IV: INCINERATOR INFORMATION

Not Applicable

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

	Volume (ft) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]  
See Attachment A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.  
See Attachment B
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).  
See Attachment B
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)  
See Attachment B
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).  
See Attachment B
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.  
See Attachment A
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).  
See Attachment A
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.  
See Attachment A

- 9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY**

A. Are standards of performance for <sup>Not Applicable</sup> new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes  No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (if yes, attach copy)

Yes  No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- |                           |                          |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:*           | 4. Capital Costs:        |

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.      b. Diameter: ft
- c. Flow Rate: ACFM      d. Temperature: °F
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable use additional pages if necessary).

1.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>Applicant must provide this information when available. Should this information not available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data Not Applicable

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP ( ) SO<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir

Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

\*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent?  Yes  No
- b. Was instrumentation calibrated in accordance with Department procedures?  
 Yes  No  Unknown

B. Meteorological Data Used for Air Quality Modeling

1. \_\_\_\_\_ Year(s) of data from \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year
2. Surface data obtained from (location) \_\_\_\_\_
3. Upper air (mixing height) data obtained from (location) \_\_\_\_\_
4. Stability wind rose (STAR) data obtained from (location) \_\_\_\_\_

C. Computer Models Used

1. \_\_\_\_\_ Modified? If yes, attach description.
2. \_\_\_\_\_ Modified? If yes, attach description.
3. \_\_\_\_\_ Modified? If yes, attach description.
4. \_\_\_\_\_ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sub>2</sub>	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A

PROJECT DESCRIPTION

MALEIC ANHYDRIDE PLANT EXPANSION



**ATTACHMENT A  
PROJECT DESCRIPTION  
MALEIC ANHYDRIDE PLANT EXPANSION**

**1.0 INTRODUCTION**

Monsanto Company is proposing to expand the existing maleic anhydride production facility at its plant located just north of Pensacola, Florida. The air compression capacity of the system will increase from  $7.2 \times 10^6$  standard cubic feet per hour (scfh) to  $10.2 \times 10^6$  scfh. Increased air compression capacity will allow the increase in facility design capacity. No change to the size or number of reactors is being proposed.

A significant decrease in maximum allowable emissions from the maleic anhydride process will result from the proposed expansion. Maximum allowable emissions requested in this application do represent an increase over actual emissions associated with the existing maleic anhydride facility. However, these increases are below the significant emission rates as defined in the federal and State of Florida Prevention of Significant Deterioration (PSD) regulations. As a result, the proposed expansion is not subject to the state or federal PSD new source review requirements.

**2.0 PROJECT DESCRIPTION**

**2.1 BACKGROUND**

Monsanto Company owns and operates a chemical manufacturing facility in Gonzalez, Florida, just north of Pensacola on the Escambia River. A general location map of the area is shown in Figure 2-1. A site location map, taken from a U.S.G.S. topographic map, is presented in Figure 2-2. The terrain in the area is generally flat with a few small hills. The surrounding area is rural with low population density. A plot plan of the Monsanto facility, denoting the location of the maleic anhydride manufacturing facility, is shown in Figure 2-3.

The Monsanto facility manufactures various chemicals, including adipic acid, nylon fibers, nylon resins, hexamethylene diamine, and maleic anhydride. A total of five (5) steam boilers support the manufacturing

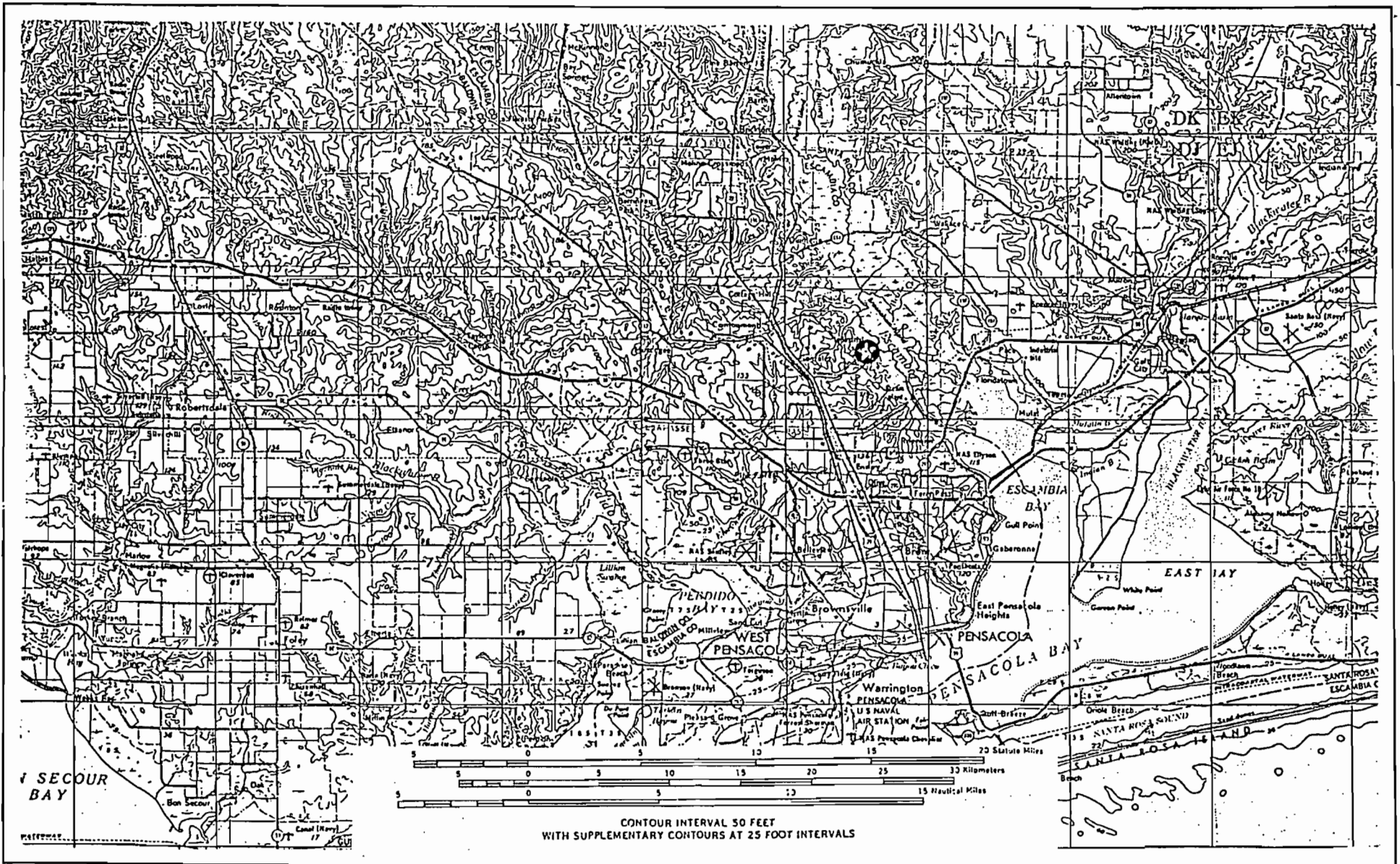


Figure 2-1. Location of Monsanto Company Plant, Gonzalez, Florida



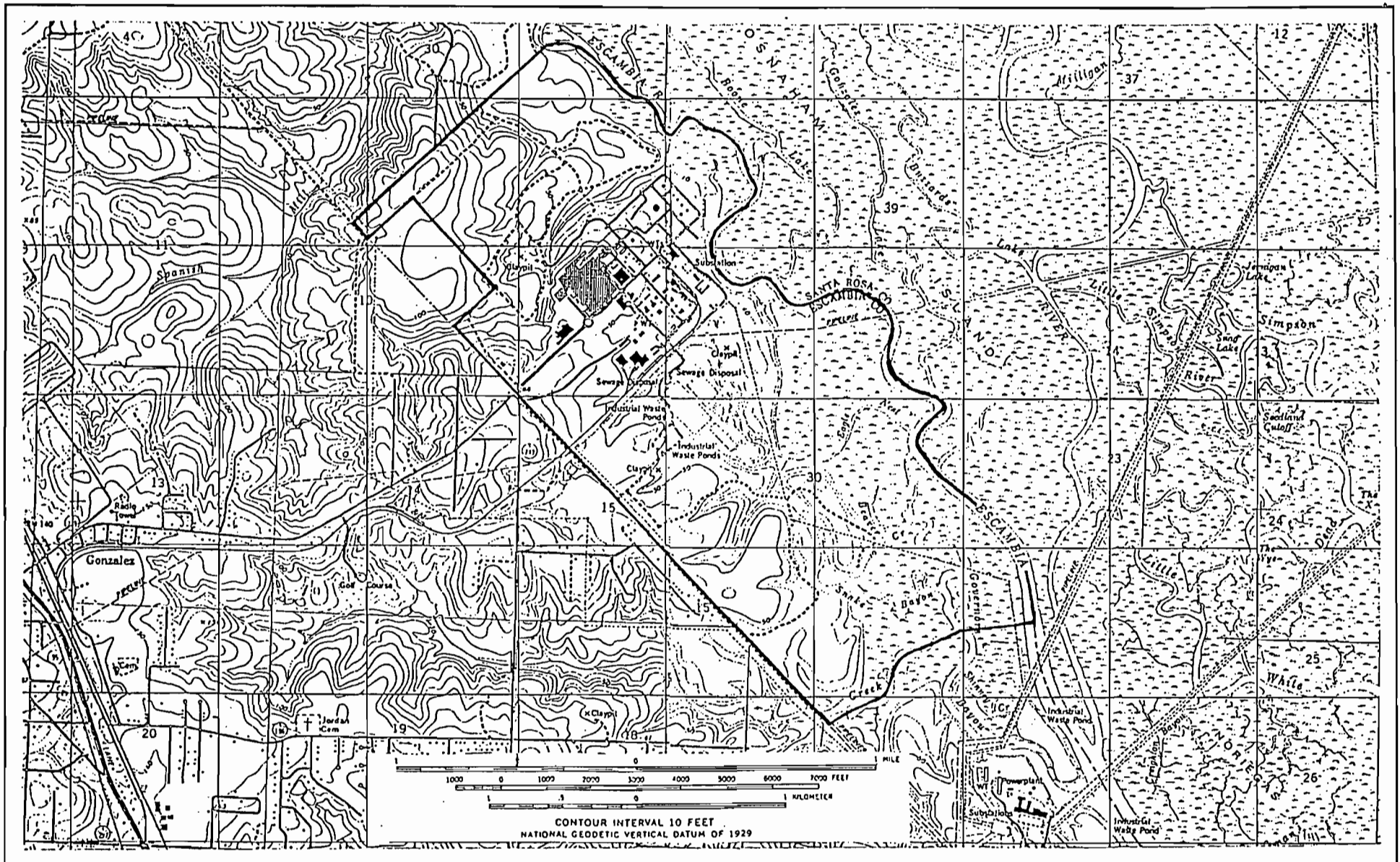


Figure 2-2. Site Map of Monsanto Company Plant



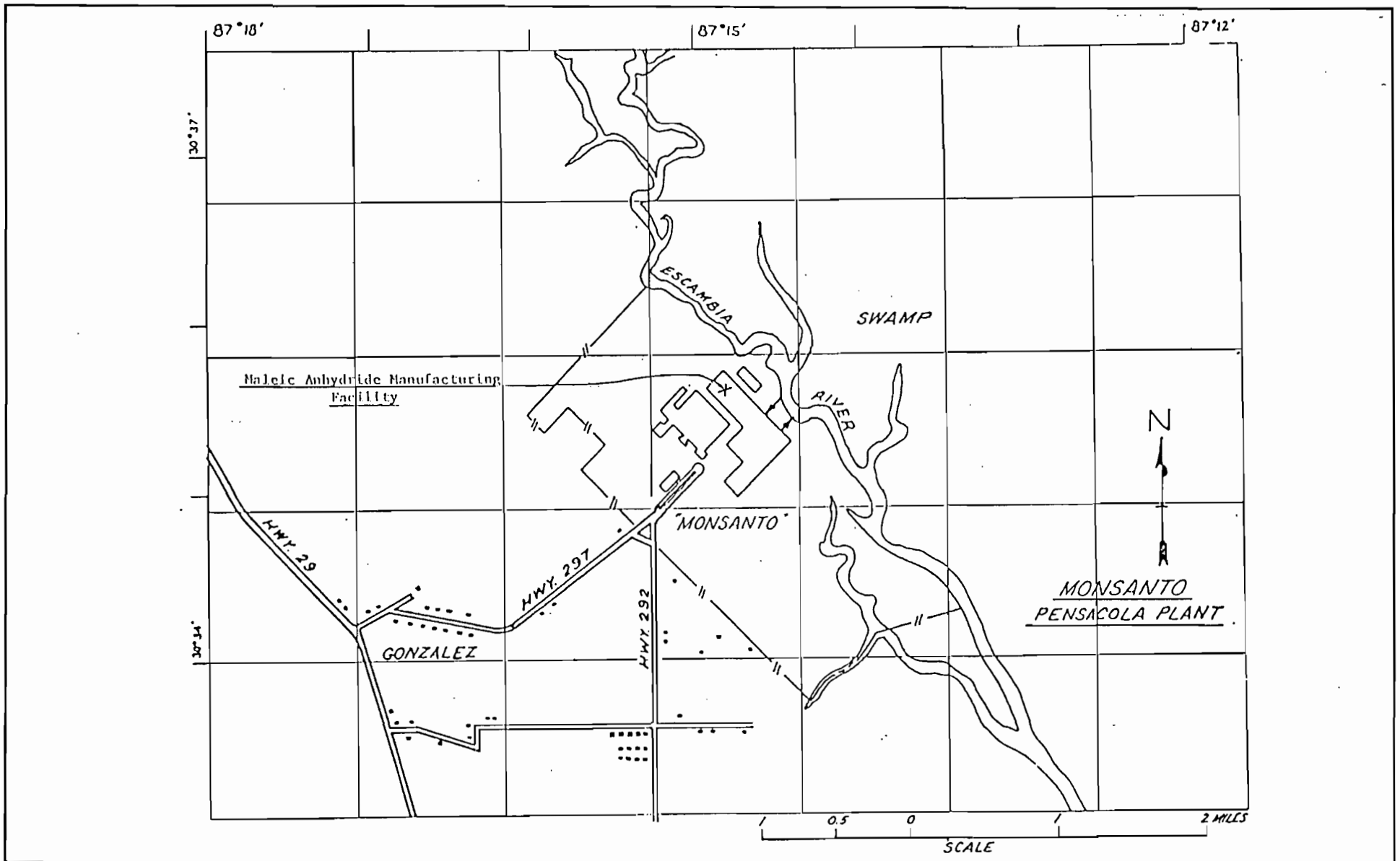


Figure 2-3. Plot of Monsanto Facility



operations. Two of these boilers (Nos. 7 & 8) serve as carbon monoxide (CO) and volatile organic compounds (VOC) control equipment for the maleic anhydride manufacturing process.

The maleic anhydride production facility at Monsanto was initially permitted in 1981. The U.S. Environmental Protection Agency (USEPA) issued the Prevention of Significant Deterioration (PSD) permit (PSD-FL-055) for the facility on March 26, 1981. The FDER issued the state air construction permit (AC17-27953) on September 10, 1980. However, Monsanto petitioned the FDER for a formal hearing on the permit. The construction permit was subsequently modified and reissued on March 31, 1981. An air operating permit was issued by FDER on March 2, 1984 (AO17-77464).

## 2.2 MALEIC ANHYDRIDE PROCESS

In the manufacture of maleic anhydride, compressed air and butane are reacted in the presence of a catalyst. The air supplies oxygen for conversion of butane to maleic anhydride. Four reactors are used in the existing plant. The reaction is not 100% efficient. Butane not converted to maleic anhydride is oxidized to carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>). The air exits the process as an off-gas stream which is routed to existing Boilers #7 and #8. Off-gases from the process contain primarily water (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>) and nitrogen (N<sub>2</sub>). In addition, the off-gases contain CO and VOC. The VOC in the waste gas stream is primarily butane.

The maleic anhydride product is separated from the waste gas stream in the product separators and then stored and refined by distillation. The refined product is then sent to product storage.

Off-gases from the reactors are passed through two existing boilers (#7 and #8) for incineration of the CO and VOC. Normal flow of waste gases is from Reactors #1 and #2 to Boiler #7, and from Reactors #3 and #4 to Boiler #8. The current operating permit limits the waste gas flow rate fed

to each boiler to  $4.1 \times 10^6$  scf/hr. A flow diagram of the existing process is presented in Figure 2-4.

The proposed expansion of the maleic anhydride plant at Monsanto will increase the maximum waste gas flow rate to each boiler (#7 and #8) from  $3.6 \times 10^6$  to  $5.1 \times 10^6$  scf/hr. The waste gases will continue to be incinerated in the existing Boilers #7 and #8.

The existing maleic anhydride reactors will be used to achieve the increased production rates. This project will increase air compression capacity and will allow an increase in the maleic anhydride production rate. Other changes to the maleic anhydride separation and refining processes will not affect air emissions.

## 2.3 AIR EMISSIONS

### 2.3.1 Boilers #7 and #8

Emissions of CO and VOC from Boilers #7 and #8 due to incineration of the maleic anhydride reactor off-gases are currently limited by the federal PSD permit. CO limits were set at 183 lb/hr, maximum 1-hour emission rate, and 148 lb/hr, maximum 24-hour average emission rate. Annual CO emissions were permitted based upon 8,760 hr/yr operation. Using the maximum 24-hour emission rate of 148 lb/hr, permitted annual CO emissions were 648.2 tons per year (TPY).

VOC emissions are limited by the federal PSD permit to 118 lb/hr, maximum 1-hour average, and 91 lb/hr, maximum 24-hour average emission rate. VOC emissions were to be reported as total gaseous non-methane organic carbon. Using the maximum 24-hour emission rate, maximum annual CO emissions were 398.6 TPY.

The FDER construction permit for the facility issued in 1981 contained emission limits identical or equivalent to the federal PSD permit. VOC emission limits were in terms of butane ( $C_4H_{10}$ ) and were 143 lb/hr, maximum

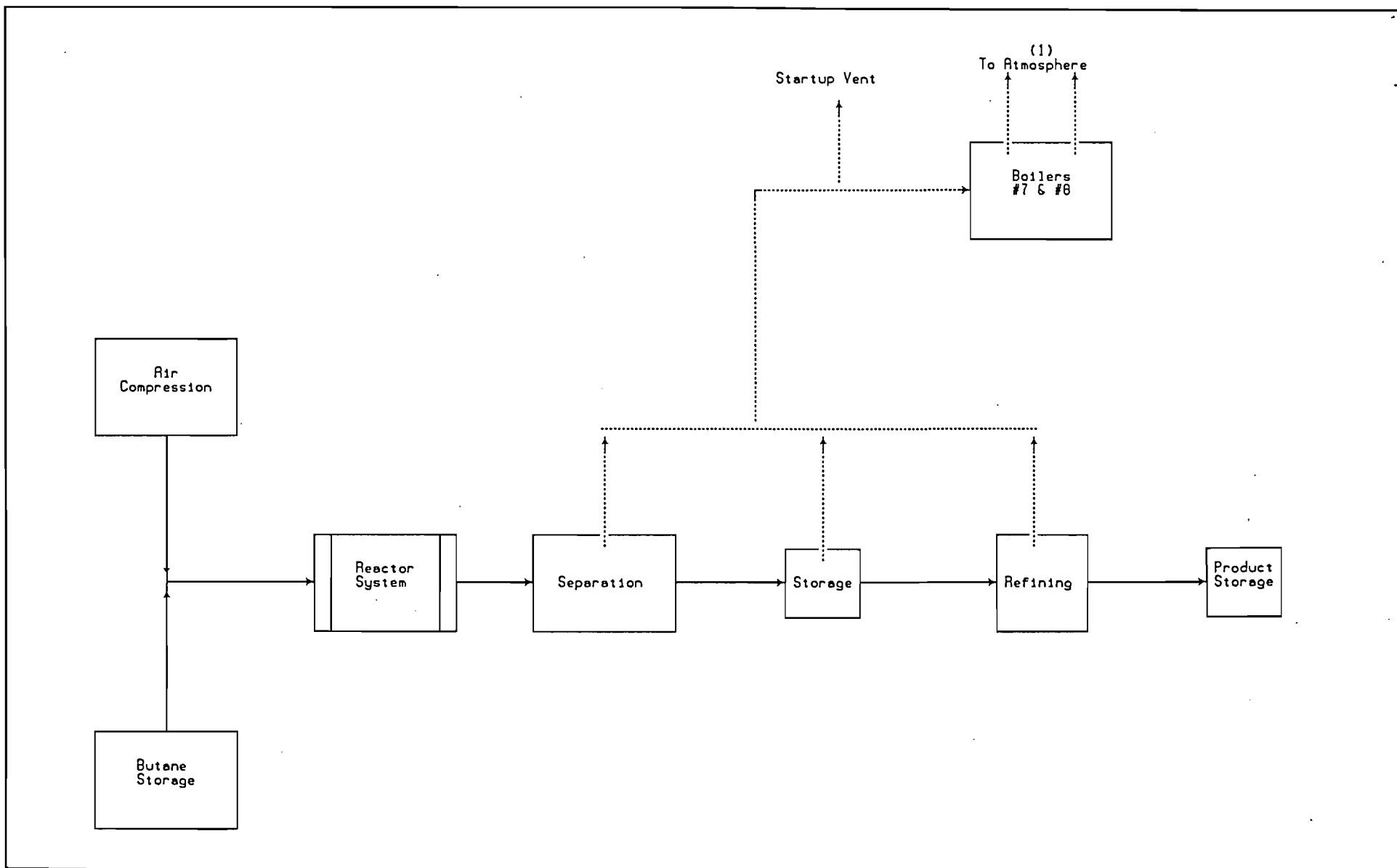


Figure 2-4 Flow Diagram of Existing Maleic Anhydride Plant, Monsanto Chemical



1-hour average, and 110 lb/hr, maximum 24-hour average. These limits are equivalent to the federal PSD permit limits when expressed as total carbon.

Monsanto is requesting a significant decrease in the current allowable emissions for the facility. Maximum allowable emissions of CO will be reduced to 96.4 TPY, and the maximum allowable VOC emission rate will be reduced to 39.9 TPY. These annual emission rates equate to an average 22.0 lb/hr for CO and 9.1 lb/hr for VOC, based upon 8,760 hr/yr operation. Due to the increased off-gas flow rate to the boilers, this reduction in allowable emissions will necessitate an increase in the minimum CO and VOC destruction efficiencies. The original construction permits for the facility were based upon destruction efficiencies of 98% for CO and 98.5% for VOC (based upon 24-hour maximum emission rates). Minimum destruction efficiency at the maximum off-gas flow rate associated with the increased maleic anhydride production rate will be 99.81% for CO and 99.87% for VOC (based upon annual average emission rates). The basis for the proposed emission rates from the expanded facility and derivation of destruction efficiencies are presented in Attachment B.

The existing Boilers #7 and #8 are considered adequate to incinerate the additional waste gas flow associated with the increased production rate. No modifications to the boilers will need to be implemented. Emissions data from the existing Boilers #7 and #8 indicate that a high level of destruction efficiency is currently being obtained. A demonstration study performed in 1983 on the facility showed maximum CO emissions to be 6.5 lb/hr and maximum VOC emissions to be 0.96 lb/hr (as methane). Tests were performed over a range of off-gas flow rates, and steaming rates, with different numbers of reactors operating, and when burning different fuels in the boilers (oil and gas). Pertinent data from the 1983 demonstration project are presented in Attachment C.

Based on the test data and operational experience since the startup of the maleic anhydride facility, the proposed allowable emission rates are considered achievable at the higher maleic anhydride production rate and



off-gas flow rate. Boilers #7 and #8 are equipped with continuous in-stack CO analyzers, with a minimum detection limit of 10 ppm(v). A CO emission rate of 22 lb/hr total equates to approximately 15 ppm(v). Therefore compliance with the CO emission limit could be verified with existing monitoring systems. Past demonstration data has shown that at CO levels of 15 ppm or less, VOC emissions are in control and are lower than minimum detection limits of Reference Method 25A.

Emissions of pollutants other than CO and VOC from Boilers #7 and #8 are covered under separate air operating permits for the boilers (A017-63177 and A017-63178, respectively). Since emissions of these other pollutants will not be affected by the proposed expansion, these other pollutants are not addressed in this application.

There are no known air toxics emissions associated with the incineration of the maleic anhydride off-gases in Boilers #7 and #8.

#### 2.3.2 Venting Emissions

The federal PSD permit and the current FDER operating permit also allow venting of process off-gases during periods of startup, shutdown or malfunction of the maleic anhydride reactors. Venting emissions are limited to 1,750 lb/hr CO and 1,750 lb/hr VOC per reactor during startups and malfunctions, and to 875 lb/hr CO and 875 lb/hr VOC per reactor during periods of shutdown. Monsanto proposes to retain these venting emission limits for the expanded maleic anhydride facility. The reactors will be operated in such a manner that these limits will not be exceeded even at the increased raw material thruput rates. No change in the frequency, duration or magnitude of venting episodes is expected as a result of this project.

Emissions due to venting of off-gases from the maleic anhydride facility are routinely monitored and recorded by Monsanto. No occurrences of excess emissions during venting episodes has occurred since facility start-up. Annual venting emissions have been reported on the Annual Operation Report submitted to FDER each year. Because measured CO and VOC emissions from

Boilers #7 and #8 have been historically very low, the reported emissions in the Annual Operation Report for the maleic anhydride plant essentially represent emissions due to venting. Venting emissions for the last three years are provided below:

<u>Year</u>	<u>CO(TPY)</u>	<u>VOC(TPY)</u>
1985	60.8	69.3
1986	101.2	115.7
1987	98.8	111.2

Because venting emissions will not increase as a result of this project, these vent stacks are not addressed in this modification permit.

### 3.0 NEW SOURCE REVIEW APPLICABILITY

#### 3.1 PSD APPLICABILITY

The existing Monsanto facility in Pensacola is a chemical process plant, and is classified as an "existing major stationary source" under PSD regulations. The proposed modification would be classified as a "major modification" if the increase in emissions due to the proposed expansion exceeds the PSD significant emission rate for any pollutant.

As discussed in Section 2.3, the proposed maximum allowable emissions due to incineration of the maleic anhydride off-gases in Boilers #7 and #8 are 96.4 TPY CO and 39.9 TPY VOC. The significant emission rates defined under PSD regulations are 100 TPY for CO and 40 TPY for VOC. Since the requested maximum allowable emissions from the expanded facility are less than the respective PSD significant emission rate, the proposed expansion is not subject to PSD new source review.

This maleic anhydride expansion project is not related to any contemporaneous increases in CO or VOC emissions that have occurred at the Monsanto facility in the last five years. There have been no contemporaneous increases in CO emissions during this period. Contemporaneous increases in VOC emissions are identified below:

<u>Project</u>	<u>VOC (TPY)</u>	<u>SIC Code</u>	<u>SIC Classification</u>
Butane Barge Unloading	4.7	4463	Marine Cargo Handling
Santoprene Production	1.4	2821	Plastic Materials and Resins

Since the expansion of the maleic anhydride facility (SIC Code 2869, Industrial Organic Chemicals) is not related to these previous increases, it is considered as a single, separate project. According to the attached USEPA policy memorandum (Attachment D), separate single projects are allowed the full PSD de minimis emission rate (i.e. 100 TPY for CO and 40 TPY for VOC). In addition, no credit is being taken for current CO and VOC emissions from the existing maleic anhydride facility.

### 3.2 EMISSION LIMITING STANDARDS

NSPS have been promulgated for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (40 CFR 60, Subpart VV). These standards apply to the maleic anhydride production facility at Monsanto because construction started on the facility after January 5, 1981. The plant is currently in compliance with the NSPS and meets all applicable requirements. The proposed expansion of the maleic anhydride facility will only increase raw material and product rates. The facility will continue to comply with the NSPS when operating under the higher process rates requested in this application. Federal NSPS were proposed for maleic anhydride process vents for plants which use benzene as a raw material in the process (45 FR 26660, April 18, 1980). However, these proposed regulations were subsequently withdrawn based upon USEPA studies which showed that potential health risks associated with these facilities were too small to warrant Federal regulatory action (49 FR 23478, June 6, 1984). Nevertheless, such standards would not apply to the Monsanto maleic anhydride facility since benzene is not used in the process.

There are no state emission limiting standards which are applicable to the maleic anhydride facility at Monsanto.

ATTACHMENT B

MALEIC ANHYDRIDE EXPANSION

EMISSION CALCULATIONS AND CONTROL DEVICE DATA

ATTACHMENT B  
Maleic Anhydride Expansion  
Emission Calculations

I. PROCESS DATA

Total maximum maleic anhydride off-gas flow rate to boilers

$$= 762,000 \text{ lb/hr}$$

$$= 10.2 \times 10^6 \text{ scf/hr}$$

Heating value of off-gases = 14.175 Btu/scf

Total maximum heat input due to off-gases

$$= 10.2 \times 10^6 \text{ scf/hr} \times 14.175 \text{ Btu/scf}$$

$$= 144.6 \times 10^6 \text{ Btu/hr}$$

Maximum CO contained in off-gases = 11,600 lb/hr

Maximum VOC contained in off-gases = 7,000 lb/hr

II. MAXIMUM EMISSIONS FROM OFF-GAS INCINERATION (BOILERS #7 AND #8)

A. Carbon Monoxide (CO)

1. Maximum annual emissions

$$\text{Total from both boilers} = 22.0 \text{ lb/hr} \times 8,760 \text{ hr/yr} / 2,000 \text{ lb/ton}$$

$$= 96.4 \text{ TPY}$$

2. Calculation of CO destruction efficiency

$$[(11,600 - 22)/11,600] \times 100 = 99.81\%$$

B. Volatile Organic Compounds (VOC)

1. Maximum annual emissions

$$\text{Total from both boilers} = 9.1 \text{ lb/hr} \times 8,760 \text{ hr/yr} / 2,000 \text{ lb/ton}$$

$$= 39.9 \text{ TPY}$$

2. Calculation of VOC destruction efficiency

$$[(7,000 - 9.1)/7,000] \times 100 = 99.87\%$$

**ATTACHMENT C**

**EMISSION TEST DATA FROM 1983 DEMONSTRATION STUDY**

Table 1. Emission Summary - Unit 7  
Monsanto Textiles Company

Date	Time	Fuel	Condition	Steam Rate lbs/hr	Waste Gas Flow 10 <sup>3</sup> SCFH	Volumetric		VOC as CH <sub>4</sub>		CO		NOx		O <sub>2</sub>	CO <sub>2</sub>
						ACFM	SCFMD	ppm <sub>v</sub> dry	lbs/hr	ppm <sub>v</sub> dry	lbs/hr	ppm <sub>v</sub> dry	lbs/hr		
5-24-83	1335-1701	Gas	Max Steam 2 Reactors	312000	3.48	293167	176244	1.0	0.44	0	0	54.5	68.8	5.30	8.30
5-24-83	0834-1206	Gas	Min Steam 2 Reactors	151750	3.54	167607	106912	0	0	0	0	-	-	7.00	7.60
7-21-83	1210-1543	Gas	Max Steam 1 Reactor	296250	1.76	297840	184810	2.1	0.96	2.6	2.09	-	-	6.30	8.70
7-21-83	0815-1115	Gas	Min Steam 1 Reactor	164333	1.77	152756	98464	0.0	0.0	6.3	2.70	-	-	5.80	9.30
7-25-83	1315-1815	Oil	Max Steam 2 Reactors	280000	3.5	311690	179162	0.1	0.04	4.9	3.83	165.8	212.8	6.10	10.00
7-25-83	0830-1207	Oil	Min Steam 2 Reactors	162500	3.5	164558	95448	0.1	0.02	4.3	1.79	-	-	8.60	5.90
7-22-83	0855-1155	Oil	Max Steam 1 Reactor	264000	1.75	267100	154408	0.1	0.04	3.9	2.63	-	-	7.20	10.40
7-22-83	1210-1555	Oil	Min Steam 1 Reactor	176000	1.75	156598	96354	0.3	0.07	4.7	1.97	-	-	6.60	10.10

Note: Emission in pounds per hour = (ppm<sub>v</sub> dry) (2.595 X 10<sup>-3</sup>) (M) (SCFMD) (60)

Source: ESE, 1983

Table 2. Emission Summary - Unit 8  
Monsanto Textiles Company

Date	Time	Fuel	Condition	Steam Rate lbs/hr	Waste Gas Flow 10 <sup>3</sup> SCFH	Volumetric		VOC as CH <sub>4</sub>		CO		NOx		O <sub>2</sub> <sup>1</sup>	CO <sub>2</sub> <sup>1</sup>
						ACFM	SCFMD	ppm <sub>v</sub> dry	lbs/hr	ppm <sub>v</sub> dry	lbs/hr	ppm <sub>v</sub> dry	lbs/hr		
7-27-83	0810-1110	Gas	Max Steam 2 Reactors	330000	4.10	358778	212712	0.0	0.0	0.8	0.74	35.7	54.4	5.30	9.20
9-27-83	0919-1229	Gas	Min Steam 2 Reactors	172400	3.51	203651	128397	1.8	0.58	6.3	3.50	-	-	6.80	7.80
5-26-83	1805-2105	Gas	Max Steam 1 Reactor	331000	1.81	318287	192653	1.3	0.62	0.0	0.0	-	-	4.1	9.20
5-26-83	1229-1634	Gas	Min Steam 1 Reactor	166200	1.85	128115	83015	1.3	0.27	0.0	0.0	-	-	4.05	9.30
7-26-83	0950-1536	Oil	Max Steam 2 Reactors	279500	3.89	335667	189781	0.0	0.0	4.4	3.64	179.1	243.4	6.0	11.2
7-27-83	1455-1755	Oil	Min Steam 2 Reactors	173250	3.78	303309	178462	0.0	0.0	8.3	6.46	-	-	8.0	6.0
7-20-83	0930-1240	Oil	Max Steam 1 Reactor	284250	2.0	275640	162398	0.9	0.36	5.7	4.04	-	-	6.0	11.8
7-20-83	1300-1600	Oil	Min Steam 1 Reactor	177000	2.0	167496	102485	0.2	0.05	5.0	2.23	-	-	5.4	11.4

Note: Emission in pounds per hour = (ppm<sub>v</sub> dry) (2.595 x 10<sup>-3</sup>) (M) (SCFMD) (60)

Source: ESR, 1983



Summary of Boilers #7 and #8  
Emissions when Burning Maleic Anhydride Off-gases  
(1983 Demonstration Report)

2 RX Gas & oil		1 RX Gas & oil	
<u>VOC lb/hr</u>	<u>CO lbs/hr</u>	<u>VOC lb/hr</u>	<u>CO lbs/hr</u>
.44	0	.96	2.09
.04	0	0	2.70
.02	3.83	.04	2.63
0	1.79	.07	1.97
0	.74	.62	0
.58	3.5	.27	0
0	3.64	.36	4.04
0	6.46	.05	2.23
<hr/>		<hr/>	
$\bar{x}$ .14	2.50	.30	1.96
$\sigma$ .23	2.26	$\sigma$ .34	1.37

Gas		Oil	
<u>VOC lb/hr</u>	<u>CO lbs/hr</u>	<u>VOC lb/hr</u>	<u>CO lb/hr</u>
.44	0	.04	3.83
.96	2.09	.04	2.63
0	.74	0	3.64
.62	0	.36	4.04
0	0	.02	1.79
0	2.70	.07	1.97
.58	3.50	0	6.46
.27	0	.05	2.23
<hr/>		<hr/>	
$\bar{x}$ .53	1.13	.07	3.32
$\sigma$ .68	1.43	$\sigma$ .12	1.54

ATTACHMENT D

USEPA MEMORANDUMS ON DE MINIMIS EMISSION INCREASES



NATIONAL COUNCIL OF THE PAPER INDUSTRY FOR AIR AND STREAM IMPROVEMENT, INC.  
260 MADISON AVE. NEW YORK, N.Y. 10016 (212) 532-9000

Dr. Isaiah Gellman  
President  
(212) 532 9000

August 5, 1987

To: Corporate Correspondents -- CC 87-38  
Regional Managers

From: Isaiah Gellman

Subject: EPA - Air - Applicability of PSD Permitting  
Requirements

CHANGES

Attached is an EPA memorandum on the subject of determining when Prevention of Significant Deterioration (PSD) permitting requirements apply to a particular project. The specific issue addressed is whether accumulated emission increases resulting from several small projects eventually trigger PSD requirements when the total emissions exceed the de minimis amounts specified in the regulations.

This memo will be of interest to those companies who plan to apply for air quality permits for an expansion or modification of an existing facility. It may be particularly relevant to pulp mill expansions where 'debottlenecking' projects are under consideration.

EPA regulations require a PSD permit to be obtained for any project that results in a significant net emission increase in any regulated pollutant. EPA has set 'significant levels' for each regulated pollutant; for example, an increase of 40 tons per year or more of SO<sub>2</sub> emissions is considered as significant. Net emission increases are calculated by summing all 'contemporaneous' actual emission increases and decreases. 'Contemporaneous' is defined as a reasonable time period to be determined on a case-by-case basis.

The EPA memorandum states that a project must by itself result in a significant net emission increase to trigger PSD requirements. Thus if a series of small projects, each of which resulted in emission increases less than the significant amount, had been undertaken, PSD review would not be required even when the total accumulated emission increase did exceed the significant amount. However, once PSD review was triggered by a project with significant net emission increases, all previous increases would

CHANGES

have to be considered, and any SO<sub>2</sub> or particulate matter emission increases would consume PSD increments.

It should be noted that this memorandum represents EPA's policy, and states which have authority to carry out the PSD program may have different interpretations and requirements. Determining exactly which PSD provisions apply to a particular project is a complex undertaking, and is often the subject of considerable negotiation between the regulatory agencies and permit applicant.

Companies may, however, find this EPA policy memorandum useful in planning an appropriate course of action for obtaining the necessary permits for projects. Please contact our Air Quality Program Manager, Dr. John Pinkerton, at this office if you have any questions on this subject.

HOME PHONE  
201/821-6046

Attach.  
CCPSD

PHONE CALL TO JOHN PINKERTON  
HOM 377-4708



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

4AW-AM

AUG 15 1983

Mr. Harold E. Hodges, P.E., Director  
Division of Air Pollution Control  
Tennessee Department of Public Health  
150 Ninth Avenue North  
Nashville, Tennessee 37203

Dear Mr. Hodges:

This is in answer to a request made by Angie Pitcock to Roger Pfaff by telephone on July 21, regarding EPA's policy on accumulation of de minimis increases in emissions at major stationary sources.

As you know, EPA interprets the PSD and nonattainment new source review rules (40CFR 51.24, 40CFR 52.21, 40CFR 51 Appendix S, 40 CFR 51.18 (j), 40CFR 52.24) as allowing an unlimited number of de minimis increases at major stationary sources without subjecting the source to review. This policy is stated in a memorandum from Edward E. Reich to Charles Whitmore, January 22, 1981, and is further confirmed in EPA's June 2, 1983 summary of applicability determinations (PSD-138).

Although the policy outlined in these documents allows a series of de minimis modifications to escape review, it is important that the reviewing agency not allow a source owner to circumvent the regulations by splitting up what would normally be considered a single major modification into two or more de minimis increases. Two or more increases should be considered by the reviewing agency to be part of the same project if they are considered part of the same project in the corporate planning of the source owner or if the emission units being constructed or modified are interdependent. For example, if the company institutes a "debottlenecking" project or a plant-wide energy conservation project involving several independent facilities, the project should be considered to be a single modification. If a company constructs a new boiler to generate steam and also adds new steam-using equipment, such as an evaporator, these units should also be considered part of the same project.

In order to facilitate agency decisions regarding whether two or more increases constitute a single project, EPA Region IV is adopting a policy which allows an initial presumption based upon easily distinguishable criteria, with allowance for rebuttal of the presumption by the applicant. Region IV policy is to consider two or more increases as a single project if the permit application for the last increase is submitted before the first increase is operational. This is a reasonable dividing line because it is easily discernible and because it would prohibit two facilities from being considered separate projects if one could not operate without the other.

For example, suppose a company obtains a permit for a new boiler at a major source in an attainment area on June 1, 1983. The new boiler emits 30 tons per year of SO<sub>2</sub> and escapes PSD review as a de minimis increase. On October 1, 1983, while the first boiler is under construction, the company submits an application for a second, identical, boiler. The agency would initially presume that these two boilers were part of a single project causing a significant increase in SO<sub>2</sub>. Both boilers would be subject to PSD, including retroactive BACT for the first boiler. However, if the company could show, through engineering analysis and internal documents, that the two boilers were planned during separate time frames and involve separate, independent facilities (such as separate product lines at a large chemical plant), the agency could allow the boilers to be treated as separate projects. Conversely, if you know that two actions are actually one project, but the source owner is able to build and operate the first one before applying for the second, solely to avoid review, you should use that knowledge to subject the project to review.

The initial presumption criteria are used for the purpose of simplifying your decision process for the more obvious cases. The final criteria should always be whether or not the source owner is circumventing the new source review rules by separating what would normally be considered one project into two or more projects.

Sincerely yours,

James T. Wilburn, Chief  
Air Management Branch  
Air and Waste Management Division

cc: Ed Reich  
Mike Trutna  
All state agencies

*Code*

JAN 5 1983

MEMORANDUM

SUBJECT: Accumulations of Emissions

FROM: Chief, Regulations Analysis Section  
Stationary Source Compliance Division

TO: Michael Johnston, Chief  
Air Operations Section, Region X, M-3202

This is in response to your memo dated December 21, 1982, concerning the application of the PSD regulations to accumulated emission increases. Accumulated emission increases are those increases occurring at major stationary sources which are not individually significant but when totalled over a period of time do exceed the significance levels.

*CHANGES*  
*CHANGES*

As your memo correctly points out, this office did send out a memorandum on January 22, 1981 which interpreted the PSD regulations so as to exclude any modification from applicability that did not in and of itself result in a significant emission increase. Thus, this would have the effect of eliminating from consideration those changes which occurred over time and whose emissions when reviewed as distinct entities are not significant, but when combined would satisfy the criteria for a significant emissions increase.

While it is true that the preamble language that you cite might be a clear indication that the Agency intended to accumulate these de minimus changes at a stationary source, there was nothing in the regulations themselves which clearly indicated that this was in fact the case. In fact, that very language you cite could also refer to the requirements for looking at contemporaneous emission increases and decreases when reviewing PSD applicability. Only after much discussion among members of the Control Programs Development Division and the Office of General Counsel was it decided to interpret the regulatory language in the manner in which we did. The policy considerations which went into that decision were

CONCURRENCES

SYMBOL	EN-34						
SURNAME	Bjorn						
DATE	1/5/83						

that (1) the permitting requirements and the resources they entail both on the part of the Agency and industry should not be directed towards these "small" changes and (2) applying BACT to the last piece which triggered the review could prove to be a rather wasteful exercise. (It was agreed to early in the deliberations that under no circumstance would EPA require retroactive application of BACT to the earlier changes.) It was also felt that it was unreasonable for a source such as a refinery to have to keep records of these de minimus emission increases with the sole purpose of possibly applying the PSD requirements sometime in the future. This would mean that another de minimus change, for little environmental gain, would have to apply BACT to this latest piece of the accumulation puzzle.

At the same time this decision was being made to exclude accumulation from consideration, it was noted that we were maintaining the goals of the program by recognizing that although these de minimus increases were not reviewable, they did consume increment and they would be included when considering contemporaneous emission increases and decreases.

It is also important to note that at the time this interpretation was made we recognized that the regulation was not clear and that a conforming amendment to the regulations would be made. By copy of this memo I am urging the Control Program Development Division to initiate this rulemaking if they haven't already done so. I would hope that such a change could be published shortly.

If I can be of any further assistance or if you wish to discuss this further, please give me a call at 382-2831.

Richard Biondi

cc: Mike Trutna  
Peter Wyckoff

EN-341:R.Biondi:kw:Draft 12-30-82:382-2831  
Final:1/4/82:amd  
Disk:RPS#2:Accumulations of Emissions



file code

JAN 22 1981

MEMORANDUM

SUBJECT: PSD Applicability

FROM: Director  
Division of Stationary Source Enforcement

TO: Charles Whitmore, Chief  
Technical Analysis Section, Region VII

This is in response to your memo of December 4, 1980, in which you requested a PSD applicability determination for Cargill Inc.'s proposed ethanol plant in Eddyville, Iowa.

The proposed plant is to be located in a designated attainment area and will consist in part of wet-milling and ethanol facilities (collectively, the "ethanol plant"). Steam and electricity for the plant are to be generated by an on-site existing power plant, which is to be converted into a co-generation unit. The addition of the ethanol plant will cause a large increase in the hours of operation of the power plant and a fuel switch to burn coal exclusively.

I would like to mention first that the project may be exempt from PSD review through a "grandfather" exemption if the state air permit for the project was issued before August 7, 1980, the project would not have been subject to the 1978 PSD regulations, as stayed, and certain other conditions are met. (See 40 CFR 52.21 (1)(4)(V)).

If the grandfather exemption does not apply the addition of the ethanol plant should be considered a modification to an existing major stationary source. In order to determine if the modification is major and subject to preconstruction PSD review, it is first necessary to determine if there will be a significant net emissions increase from the modification itself. EPA is interpreting the term "net emissions increase" as any significant increase in actual emissions from a physical change or change in the method of operation at a stationary source and any other creditable contemporaneous increases or decreases in actual emissions. A conforming amendment to this effect will be published in the Federal Register. In this case there is an expected increase at the ethanol plant of approximately 15 TPY of TSP, 11

CONCURRENCES

SYMBOL	EN-341	EN-341					
SURNAME	<i>Hillebrand</i>	<i>Ward</i>	<i>Rouse</i>				
DATE	1/13/81	1/15/81	1-22-81				

December 1, 1981

TPY of SO<sub>2</sub> and less than 40 TPY VOC. All of these emission rates are de minimus, (See 40 CFR 52.21(b)(23)) and therefore this modification would not be subject to PSD review. Regardless of whether or not this is determined to be a modification any increase in emission will consume increment provided the baseline has been triggered.

It is also important to note that, in the absence of any SIP or permit limitations, neither the increase in emissions from the switch to burn coal exclusively nor the increase in hours of operation at the power plant would be considered a modification (See 40 CFR 52.21(b)(2)(iii)(e) and (f)).

This determination has been made with the concurrence of the Office of Air Quality Planning and Standards and the Office of General Counsel. If you have any questions regarding this memo, please contact Janet Littlejohn of my staff at 755-2564.

Edward E. Peich

cc: Peter Wyckoff, OGC  
Mike Trutna, OAQPS  
Darryl Tyler, OAQPS